

(22) (3 No)
HIS HIGHNESS' GOVERNMENT, JAMMU AND KASHMIR.

ORDER NO. 1006-C OF 1942.

RULES UNDER THE PETROLEUM ACT OF 1938.



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HIS HIGHNESS' GOVERNMENT JAMMU AND KASHMIR

CHIEF SECRETARIAT.

(General Department)

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SUBJECT :—Rules under the Petroleum Act of 1998 Memo-
randum No. C-432 dated 17th July 1942.

COUNCIL ORDER No. 1006-C of 1942.

29th September 1942.

Sanction is accorded to the publication of the Rules and
Notifications forming annexures to this order.

By order in Council,

(Sd.) N. GOPALASWAMI,

PRIME MINISTER.

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NOTIFICATION.

No.——

In exercise of the powers conferred by sub-section (1) of section 14 of the Jammu and Kashmir Petroleum Act, 1998, Government are pleased to authorise the officers mentioned in the first column of the schedule attached hereto to enter any place in the areas specified in the second schedule hereto where petroleum is being imported, transported, stored, produced, refined, or blended and to inspect and take samples for testing of any petroleum found therein.

Officers.

Areas.

- | | | |
|---|---|--|
| <ol style="list-style-type: none"> 1. All District Magistrates. 2. All Sub-Divisional Magistrates 3. All Customs and Excise Officers
not below the rank of an
Assistant Inspector. | } | The respective areas
over which their
authority extends. |
|---|---|--|

(Sd.) FERROZ DIN,

Secretary to Government, Revenue Department.

NOTIFICATION

No.——

In exercise of the powers conferred by sub-section (1) of section 13 of the Jammu and Kashmir Petroleum Act, 1998, Government are pleased to authorise the officers mentioned in the first column of the schedule attached hereto to enter any place in the areas specified in the second column of the schedule hereto where petroleum is being imported, stored, produced, refined or blended or is under transport and inspect all receptacles and appliances used in connection with

petroleum in order to ascertain if they are in accordance with the provisions of Chapter I of the said Act and the rules made thereunder.

Officers.

Areas.

-
1. All District Magistrates.
 2. All Sub-Divisional Magistrates.
 3. All Police Officers not below the rank of Inspector.
 4. All Customs and Excise Officers not below the rank of Assistant Inspector.

The respective areas over which their authority extends.

(Sd.) FERROZ DIN,

Secretary to Government Revenue Department.

NOTIFICATION.

No. —

In exercise of the powers conferred by section 17 of the Jammu and Kashmir Petroleum Act, 1998 Government are pleased to authorise the officer noted below to test petroleum of which samples have been taken under the said Act which have been submitted to him for test by any person, and to grant certificates of the result of such tests.

Officer.

-
1. Chemical Examiner His Highness' Government, Jammu and Kashmir.

(Sd.) FERROZ DIN,

Revenue Secretary.

NOTIFICATION.

In exercise of the powers conferred by section 31 of the Jammu and Kashmir Petroleum Act, 1998 (XIV of 1998) the Government are pleased to restrict the operation of the provisions of the Jammu and Kashmir State Municipal Act, 1998 in so far as the said Act relates to the storage of Petroleum which has its flashing point below 200° Fahrenheit to the following quantities, namely:—

1. In the case of dangerous petroleum not intended for sale. Not exceeding six gallons.

Provided that it is kept in securely stoppered receptacles of glass, stoneware or metal, not exceeding one quart in capacity in the case of receptacles of glass or stoneware and not exceeding five gallons in capacity, in the case of receptacles of metal.

- (II) in the case of non-dangerous petroleum, having its flashing point below 150° Fahrenheit. Not exceeding five hundred gallons.

Provided that it is contained in receptacles not exceeding two hundred gallons in capacity.

- (III) in the case of non-dangerous petroleum having its flashing point not below 150° Fahrenheit but below 200 Fahrenheit. Not exceeding ten thousand gallons.

Provided that it is not stored in the same installations or storage shed as other petroleum and it is exempt from licence under Chapter V of the Rules issued under the Petroleum Act, 1998.

(Sd.) FERROZ DIN,

Revenue Secretary

THE JAMMU AND KASHMIR PETROLEUM RULES 1998.

NOTIFICATION.

No.....dated.....194 .

In exercise of the powers conferred by section 4, sub-section (2) of section 14, sections 21 and 22 and sub-section (1) of section 29 of the Jammu and Kashmir Petroleum Act 1998 (XIV of 1998) the Government are pleased to make the following rules.

Rules.

CHAPTER I.

PRELIMINARY.

1. These rules may be called the Jammu and Kashmir Petroleum Rules, 1998.

Short title.

2. (1) All notifications and rules issued and all appointments made by the Government under the Petroleum Act, 1977 (Act No. XXXII of 1977) are hereby superseded, but

(i) all licenses or duplicates granted or renewed and all fees imposed or levied shall be deemed to have been respectively granted, renewed, imposed or levied under these rules ; and

(ii) all approval given and all powers conferred by or under any notification or rules so superseded shall so far as they are consistant with the Act and these rules, be deemed to have been given or conferred by or under these rules.

(2) Anything not in conformity with these rules which was permitted to be done by or under any rules inforce immediately before the comming into force of these rules and which under these rules, may be permitted by the Licensing Authority to be done, shall be deemed to have been so permitted by the Licensing Authority unless the Licensing Authority after such notice of his intention as he considers reasonable, declares that it is not so permitted.

3. In these rules, unless there is anything repugnant in the subject or context :—

Definitions,

(a) "The Act" means the Jammu and Kashmir Petroleum Act, 1998.

(b) "Licensing Authority" means the Inspector General of Customs and Excise.

(c) "District Authority" means the District Magistrate.

(d) "Heavy Petroleum" means petroleum which has its flashing point not below 150° F.

(e) "Inspector" means an officer authorised by the Government under sub-section (1) of section 13 of the Act ;

(f) "Installation" means any premises within which any place has been specially prepared for the storage of petroleum in bulk, but does not include a well-head tank ;

(g) "Petroleum in bulk" means petroleum contained in a receptacle exceeding two hundred gallons in capacity ;

(h) "Protected works" includes—

(a) buildings in which persons dwell or assemble, timber yards and buildings or places where petroleum is stored and

(b) any public road or other place which the Inspector General of Custom and Excise has by written order declared to be a protected work, but does not include any building or place which forms part of an installation ;

(i) "Sampling Officer" means an officer authorized by the Government under sub-section (1) of section 14 of the Act ;

(j) "Storage Shed" means a building used for the storage of petroleum otherwise than in bulk, whether it forms or does not form part of an installation, but does not include a building used for the storage of petroleum exempt from licence under sections 7, 8 or 9 of the Act ;

(k) "Testing Officer" means an officer authorized by the Government to test petroleum under section 17 of the Act ; and

(l) "well-tank head" means a tank into which crude petroleum flowing or being pumped from a well is first discharged.

4. Nothing in these rules, except Chapter IX, applies to petroleum which has its flashing point not below 200° F.

CHAPTER II.

IMPORTATION OF PETROLEUM.

5. Save as provided in sections 8, 9, and 10 of the Act, dangerous petroleum shall not be imported except under a license granted under these rules.

License for import of dangerous petroleum.

6 Nothing in this Chapter applies to—

(a) dangerous petroleum not exceeding 6 gallons in quantity which is not intended for sale ;

(b) dangerous petroleum contained in any fuel tank incorporated in a motor conveyance.

(2) Nothing in rules 5 and 7 shall apply to petroleum imported by the Jammu and Kashmir State Forces.

7. (1) Every person desiring to import petroleum shall furnish personally or through his agent to the Officer-In-charge of the Customs Post through which the import is to be made, a certificate of storage accommodation in Form 'A' signed by the said persons or his agent ;

Importer to furnish certificate of storage accommodation,
 Provided that, where the importer intends to import both dangerous and non-dangerous petroleum, separate form shall be furnished for dangerous and non-dangerous petroleum.

Provided further that this sub-rule shall not apply where the quantity of non-dangerous petroleum to be imported by any one consignee does not exceed 500 gallons, or where the quantity of dangerous petroleum to be so imported does not exceed 60 gallons.

(2) Every person desiring to import dangerous petroleum shall produce, personally or through his agent before the Officer-In-charge of the Customs post of import, his license for the import and storage of such petroleum.

8. (1) No imported petroleum shall be unloaded except with the permission of the Officer-In-charge of the Customs post of import.

(2) If the Officer-In-charge of the Customs post after receiving—

(a) the Testing Officer's report on any petroleum.

(b) the certificate, required by sub-rule one of rule 7 and

(c) the license required by sub rule (2) of rule 7, and after making such further enquiries as he deems necessary, is satisfied that the petroleum can lawfully be imported and that there is suitable accommodation for it, he shall permit it to be un-loaded.

(3) Nothing in this rule shall affect the power of the officer-In-Charge of the Customs post to detain the petroleum under any other law or rule for the time being in force.

9 (1) Petroleum imported otherwise than in bulk shall be unloaded at the yards provided for the purpose.

Unloading of petroleum imported otherwise than in bulk.

(2) No petroleum contained in cask, drums or other receptacles shall be unloaded unless such receptacles are free from leakage and of such strength and construction as not to be liable to be broken or to leak except in case of gross carelessness or extraordinary accident.

Provided that petroleum contained in casks, drums or other receptacles which do not satisfy the requirements of this sub-rule may, subject to such conditions as the Officer-In-Charge of the Customs post may impose, be unloaded at a separate place approved for the purpose.

10. Nothing in rules 7 to 9 inclusive applies to heavy petroleum.

CHAPTER III

Transport of petroleum.

PART I GENERAL.

11. All due precautions shall be taken at all times to prevent accident by fire or explosion.

Prevention of accidents,

12. All due precautions shall be taken at all times to prevent any escape of petroleum during transport especially into any drain, sewer, river or water course.

Prevention of escape of petroleum.

13. All empty tanks or other receptacles which have contained dangerous petroleum or which have contained non-dangerous petroleum in bulk shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum vapour.

Empty receptacles.

14. (1) Dangerous petroleum, if not in bulk, shall be contained in gas-tight tinned, galvanized or otherwise externally rust proofed sheet iron or steel receptacles which shall be fitted with well-made fitting apertures and well-fitting screw plug, or with screw caps or other caps with metal airtight under-caps. The receptacles shall be kept in proper repair.^t

Receptacles for dangerous petroleum.

(2) No receptacles, other than tanks or tank-carts of a type approved in writing by the Inspector General of Police shall be of more than 65 gallons capacity excluding the airspace prescribed by sub-rule (7)

(3) The receptacles other than tanks or tank carts, shall be of a type approved in writing by the Licensing Authority and shall have the following thickness of metal.

Not less than

Capacity exclusive of the prescribed
air-space not exceeding 2 gallons ... 27 B. G.
Exceeding 2 gallons but not exceeding

		4 gallons	... 22	„
„	4	30 „	... 18	„
„	30	45 „	... 17	„
„	45	„	... 16	„

(4) Where the approval of the Licensing Authority is sought to a type of receptacles not previously approved, three copies of a detailed drawing thereof to scale shall be forwarded to him.

(5) The receptacles shall be so constructed and secured as not to be liable, except under circumstances of gross negligence or extraordinary accident to become defective, leaky or insecure in transit.

(6) The receptacles shall bear a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Petrol" or "Motor" spirit or an equivalent warning of the dangerous nature of the petroleum.

(7) An air space of not less than $7\frac{1}{2}$ per cent. of its capacity shall be left in each tank, drum, or other receptacle containing dangerous petroleum.

(8) Nothing in sub-rules (1), (2), (3), (4) and (6) shall apply to receptacles in the possession of the Jammu and Kashmir State Forces.

15. Non-dangerous petroleum, if not in bulk, shall be packed in air-tight tins or drums of steel or iron or in other receptacles not easily broken or in tanks permanently fixed to cart-wagons, boats or other means of carriage, and of type approved by the Inspector General of Police.

16. (1) No person shall deliver any petroleum to any one in the State other than the holder of a storage licence or his authorized agent or railway administration.

Restriction on delivery
and despatch of petrol-
eum.

(2) No person shall despatch any petroleum to any one in the State other than the holder of a storage license.

(3) Notwithstanding anything contained in sub rule (2) non-dangerous petroleum not exceeding 3,000 gallons in quantity packed in sealed air-tight tins or drums of steel or iron may be despatched to a person not holding a storage license, provided that the person despatching the petroleum has satisfied himself that prior arrangements have been made by the person to whom the petroleum is despatched for the immediate disposal in the original packages of any quantity in excess of 500 gallons.

(4) This rule shall not apply to the delivery or despatch of petroleum in quantities which are permitted by the Act or these rules to be stored without license or to any petroleum in the possession of the Jammu and Kashmir State Forces

PART II.

TRANSPORT ON LAND BY VEHICLES.

17. (1) No fire or other artificial light capable of igniting inflammable vapour shall be allowed on any vehicle containing petroleum in bulk.

(2) No person shall smoke while on or attending such a vehicle.

(3) No article or substance capable of causing fire or explosion shall be carried on such a vehicle.

Explanation.—For the purposes of this rule any tank or other receptacle which has contained petroleum and which has not been thoroughly cleaned and freed from inflammable vapour shall be deemed to contain petroleum.

18. (1) Tank-wagons, lorries or carts transporting petroleum shall only be filled or discharged by means of metal pipes or armoured hose in which the armouring is electrically continuous throughout.

(2) Tanks, other than fuel tanks on vehicles, containing dangerous petroleum shall not be filled or discharged :—

(i) within 100 feet of any fire furnace or artificial light capable of igniting inflammable vapour, or

(ii) at any place where the lorry, wagon or cart is exposed to sparks ;

Provided that the distance specified in clause (i) may be

reduced to 30 feet when the petroleum is filled or discharged under seal and closed vapour return pipe lines are provided :

Provided further that the distance specified in clause (i) may be reduced to the figure prescribed in the license in Form K where the petroleum is filled, stored and discharged into a tank in any premises licensed in that Form.

Explanation. —A pipe supplying liquid to a tank is "under seal" to that tank if it is screwed to the tank or otherwise attached so that no liquid or vapour can escape into the air except through an approved vent.

19. An adequate supply of sand or other efficient means of extinguishing fire shall be carried in an easily accessible position on every vehicle transporting petroleum in bulk by road.

Means of extinguishing fire to be carried.

20. Petroleum shall not be transported on any public vehicle which is carrying passengers.

Prohibition as to public service vehicles

21. (1) Every vehicle while engaged in the transport of petroleum by road shall be constantly attended by at least one person :

Vehicles to be constantly attended.

Provided that such vehicles may be left unattended in places previously approved by the Inspector General of Police.

(2) Every vehicle on which more than 1,000 gallon of petroleum is being transported by road, or which, while transporting any petroleum by road is being trailed by another vehicle, shall so long as it is in motion be attended by at least two persons.

22. (1) A trailer not exclusively used for transporting petroleum shall not be attached to any vehicle transporting petroleum by road.

Trailers attached to vehicles transporting petroleum by road

(2) A trailer transporting petroleum shall not be attached to any vehicle other than a vehicle used for transporting petroleum and not more than one trailer shall be so attached.

(3) A trailer shall have two axles.

(4) When a trailer is attached to a vehicle, the total quantity of petroleum transported on the trailer and the vehicle combined shall not exceed 2,000 gallons.

(5) If a trailer transporting dangerous petroleum is attached to a vehicle transporting non-dangerous petroleum the vehicle shall comply with all the provisions of these rules relating to vehicles transporting dangerous petroleum.

(6) A trailer other than a tank trailer shall not be

attached to a tank wagon. The capacity of a tank trailer shall not exceed 500 gallons, and no trailer shall be attached to a tank-wagon of greater capacity than 1,500 gallons.

(7) No trailer attached to a tank-wagon shall be employed within any thickly populated area without the permission in writing of the District Authority.

23. In these rules the tank forming part of a tank wagon or tank trailer shall be deemed to include any number of tanks on the same chassis and any limitation herein prescribed on the capacity of a tank shall be construed so as to permit of the tank containing the amount specified under varying degrees of temperature

24. If electric lighting is employed on any vehicle including a trailer, used in the transport of petroleum other than heavy petroleum by road, the following conditions shall be complied with:—

(i) the pressure shall not exceed sixteen volts ;
(ii) the circuit shall be heavily insulated and shall be independent of the chassis, and the wiring shall be so fixed and protected as to reduce as far as possible the risk of damage ;

(iii) the generator, battery, switches and fuses shall be carried in front of the fire-resisting screen and the battery shall be in an easily accessible position ; and

(iv) means of cutting off the current close to the battery by a double pole switch or other suitable method shall be provided.

25. (1) No motor conveyance other than aircraft shall fill or replenish its fuel tanks with petroleum other than heavy petroleum directly from vehicles carrying petroleum in bulk.

(2) Aircraft may receive fuel by means of specially constructed tank lorries or wagons only if these are of a type approved by the Inspector General of Police for this purpose.

(3) During the fuelling of aircraft used for the conveyance of passengers no passengers shall be allowed to remain in the machine.

(4) No person shall be allowed to smoke within 100 feet of any aircraft while it is being or is about to be-fuelled.

(5) All aircraft engines within the distance specified in sub-rule (4) shall be stopped so long as fuelling is in progress.

(6) Nothing in sub-rules (2) and (5) shall apply to military aircraft fuelling on military aerodromes.

Owner responsible for
observance of rules.

26. The owner of a vehicle used for the transport of petroleum who employs any person in connection with such transport, shall be responsible that all necessary measures have been taken to ensure that such person is acquainted with and carries out the provisions of these rules.

27. During the filling, discharging or emptying of any tank wagon or trailer transporting petroleum in bulk other than heavy petroleum the following precautions shall be observed.

(i) if the vehicle is mechanically-driven the engine shall be stopped so long as the filling, discharging or emptying is in progress and shall not be restarted until all tanks and valves have been securely closed :

Provided that this condition may be dispensed with in the case of vehicles approved under sub-rule (2) of rule 25 which are supplying aircraft,

(ii) Adequate provision shall be made to prevent the accumulation of a dangerous static charge of electricity.

(iii) if the wagon is drawn by an animal or animals they shall be removed from the wagon and the wheels securely scotched before the filling, discharging or emptying of any dangerous petroleum is begun, and

(iv) the vehicle shall be constantly attended by a competent person.

28. Petroleum in cans or other receptacles shall not be transported by road on any tank-wagon used for the transport of petroleum unless wagon is so constructed as to comply with the conditions applicable to transport on wagons other than tank wagons as well as with the conditions applicable to transport on tank wagons.

29. Except during the operations of filling or emptying a tank wagon the filling and dipping pipes shall be kept securely closed. Where the filling pipes are not provided with a liquid seal, the covers shall be kept locked or properly sealed except during the operation of filling a tank-wagon, and the keys shall not be carried on the wagon.

30. Except where approved electric lighting as specified in rule 59 is exclusively used, the filling, discharging and emptying of tank-wagons shall be performed between the hours of sunrise and sunset.

31. (1) petroleum in bulk shall not be transported by land except in a vehicle of a type approved in writing by the Inspector General of police.

(2) All such vehicles other than those exclusively used for the transport of heavy petroleum shall have a stamped embossed, painted or printed warning exhibiting in conspicuous characters the words "Petrol", "Motor Spirit" Kerosene or an equivalent warning of the nature of the contents.

(3) Every such vehicle and its fittings shall be maintained in good condition.

32. (1) Every vehicle on which petroleum not in bulk is transported shall be strongly constructed and with sides and back of adequate height and shall be maintained in good condition.

Vehicles for transport other than in bulk

(2) In the case of animal-drawn vehicle the requirement in sub-rule (1) regarding the sides and back of the vehicle shall not apply if the load is securely fastened to the vehicle.

(3) All receptacles shall be so packed as not to project beyond the sides or back of the vehicle.

33 (1) In every mechanically driven vehicle used for the transport by road of petroleum other than non-dangerous petroleum not in bulk or heavy petroleum.

Engines of mechanically driven vehicle

(a) the engine shall be of an internal combustion type ;
 (b) the engine fuel tank and electric batteries shall be effectively screened from the body of the vehicle by a fire-resisting shield carried up above the height of the load and down to within twelve inches of the ground.

(c) the exhaust shall be wholly in front of the fire-resisting shield.

(2) If windows are provided in the fire-resisting shield they shall be fitted with wired glass.

(3) The fuel tank of every such vehicle other than an articulated vehicle may be behind the fire-resisting shield if :

(a) a fuel feed apparatus, placed in front of the shield, is used to lift the contents from the fuel tank, and

(b) the fuel tank is protected from blows by the frame or by stout steel guards, and the filling hole cover is provided with a lock.

(4) The fuel tank of any vehicle may be behind the fire-resisting shield if the fuel used in the engine is heavy petroleum.

(5) A quick action cut-off valve shall be fitted to the fuel feed pipe of every such vehicle in an easily accessible position, which shall be clearly marked.

34. Without prejudice to the operation of any other provision of law for the time being in force whereby a lower limit of speed is imposed, the speed of a motor tank wagon, or a

Speed limit for vehicles.

motor lorry transporting petroleum in receptacles shall not exceed 30 miles per hour if fitted with pneumatic tyres and 15 miles per hour if fitted with solid tyres.

35. (1) If the Inspector General of police is satisfied that in respect of any class of vehicle any of the requirements of rules 22, 32 and 33 may be safely suspended or relaxed he may authorise such suspension or relaxation for such period and under such conditions as he may think fit.

Exemptions.

(2) Nothing in rules 22, 24, 31, 32 and 33 shall apply to vehicles and trailers in the possession of the Jammu and Kashmir State forces.

36. (1) Rules 17 to 34 shall not apply to the conveyances of petroleum in any motor vehicle for use only in the propulsion of such vehicles.

Special provisions for motor conveyances.

(2) No motor conveyance carrying passengers on hire shall carry any petroleum other than :—

(i) petroleum in the fuel tank incorporated in the conveyance and.

(ii) petroleum not exceeding 20 gallons in quantity intended to be used to generate motive power for the conveyance and kept in the manner provided in sub-section (2) of section 8 of the Act.

(3) During the filling or replenishment of the fuel tank of a vehicle licensed for the conveyance of more than six passengers on hire, the driver or other person in charge of the vehicle shall not allow any passenger to remain in the vehicle.

(4) All petroleum tins carried in a vehicle carrying passengers for hire shall be securely closed and shall be carried in a specially prepared receptacle which is not accessible to passengers in the vehicle, and is not on the roof.

PART III.

TRANSPORT BY PIPE LINES.

37. The rules in this part apply only to the transport of petroleum by means of pipe lines other than those in any area in which operations for the winning of natural petroleum or natural gas or both are carried on or within the limits of refineries and installations.

Application.

38. An approved casing shall be put over the pipe line where it passes under any railway or public road and an approved protective casing shall be constructed round the pipe where it crosses over any railway or protected work.

Provided that the Inspector General of Customs and Excise, may waive this rule in the case of any specified road or roads, if he is satisfied that the safety of the public is not likely to be endangered thereby.

(2) The Inspector General of Customs and Excise may require an extra casing to be put over the pipe line where it crosses any stream, road, railway or protected work.

39. The whole of every pipe line shall be efficiently patrolled.

40. As a precaution against excessive pressure in the pipe line an automatic by-pass relief valve and a reliable pressure gauge shall be placed on the common discharge pipe at pumping stations.

41. A telephone or telegraph line shall be provided with connections at frequent intervals along the pipe line. One telephone or telegraph line shall suffice for a series of parallel pipe lines ;

Provided that this rule shall not apply to a pipe line connecting railway sidings with installations if the length of such pipe line does not exceed one mile.

42. Gate valves shall be provided at reasonable intervals.

43. Tank gauges shall be checked between stations at frequent intervals.

CHAPTER IV.

STORAGE OF PETROLEUM REQUIRING LICENSE.

44. Save as provided in section 7, 8 and 9 of the Act and by rule 63 no one shall store any petroleum except under a license granted under these rules ; Provided that no license shall be necessary for storage in a well-head tank.

45. (1) No person shall smoke in any installation or storage shed.
Precautions against fire

(2) No person shall carry matches, fuses or other appliance for producing ignition or explosion in any installation or storage shed which is used for the storage of dangerous petroleum.

(3) No fire, furnace or other source of heat or light capable of igniting inflammable vapour shall be allowed in any licensed installation or storage shed save in places specially authorised by the Licensing Authority for the purpose.

(4) An adequate supply of dry sand or earth together with the necessary implements for its convenient application, or other efficient means of extinguishing petroleum fires, shall always be kept in every installation and in or adjacent to every storage shed.

46. All operations within an installation or storage shed shall be conducted under the supervision of an experienced responsible agent or supervisor.
Supervision of operations within an installation in storage shed.

47. The ground in the interior of an installation, and the protected area surrounding any storage shed or installation, shall be kept clean and free from all inflammable material waste vegetation and rubbish.
Cleanliness of installation and storage shed.

EXPLANATION.—In this rule “protected area” means the area necessary for the maintenance of the distances required under the conditions of the license to be kept clear between any installation or storage shed and any protected work.

48. (1) All enclosures surrounding tanks or buildings belonging to an installation or storage shed shall be kept drained and no water shall be allowed to accumulate in the enclosure.
Drainage.

(2) Where drainage is effected by means of a pipe the pipe shall be fitted with a valve actuated from the outside of the enclosure.

Provided that this sub-rule shall not apply to storage sheds which are not required under these rules or the terms of the license to be provided with an enclosure wall or embankment.

(3) All valves and other openings for draining off water shall be kept closed except when water is being drained off.

(4) The nature of the drainage arrangements shall be shown in the plan submitted with the application for a licence.

49. (1) Every installation shall be surrounded by a wall
Exclusion of unauthorised persons. or fence of at least six feet in height.

Provided that nothing in this sub-rule shall apply to an installation licensed under the rules in force immediately before these rules come into operation unless its fencing is considered by the Licensing Authority to be unsatisfactory.

(2) Precautions shall be taken to prevent un-authorised persons from having access to any storage shed or installation.

50. No person under the age of 15 years shall be employed in or allowed to enter any premises
Children. licensed under these rules.

51. The provisions of rules 13, 14 and 15 shall apply to
Receptacles for petroleum. petroleum stored under license.

52. No installation or storage shed shall without permission in writing from the Inspector
Petroleum only to be stored. General of Customs and Excise be used for any purpose other than the storage and distribution of petroleum and purposes directly connected therewith.

53. The capacity in gallons of every tank in an installation shall be conspicuously marked on the
Marking of capacity of tanks. tank.

54. (1) Every tank or other receptacle used for the
Construction of tanks. storage of petroleum in bulk other than well-head tank shall be constructed of iron or steel properly erected and designed according to sound engineering practice, and, together with all pipes and fittings, shall be so constructed and maintained as to prevent any leakage of petroleum.

(2) The height of a storage tank shall not exceed its diameters.

Provided that, in the case of tanks of less than 30,000 gallons capacity, the height may extend to one and half times the diameter.

(3) No tank shall be more than 50 feet in height.

55. (1) Storage tanks or other receptacles for the storage
Testing of Tanks. of petroleum in bulk other than well-head tanks, after being placed in a final position and before being brought into use, shall, unless they were in use before the publication of these rules, be tested by water pressure by the licensee in the presence of an Engineer accepted as qualified for the purpose by the Licensing Authority.

(2) The water used for testing shall be free from petroleum and shall not be passed through any pipes or pumps

ordinarily used for the conveyance of petroleum.

Provided that, where the Licensing Authority is satisfied that it is not reasonably possible to convey water by pipes or pumps other than these ordinarily used for the conveyance of petroleum, he may permit the use of a petroleum-pipe or pump for the conveyance of water subject to such conditions as he may impose.

(3) The test referred to in sub-rule (i) shall also be made before any receptacles for the storage of petroleum in bulk are brought into use after being repaired.

56. All tanks or other receptacles for the storage of petroleum in bulk, other than well-head tanks or tanks or receptacles of less than 10,000 gallons capacity containing heavy petroleum shall be electrically connected with the earth in an efficient manner by means of not less than two separate and distinct connections placed at opposite extremities of such tank or receptacle. The roof and all metal connections of such tank or receptacle shall be in efficient electrical contact with the body of such tank or receptacle.

57. The connections and contacts required by rule 56 shall be inspected and tested at least once in every year by the licensee of the tank or receptacle in the manner prescribed by the Licensing Authority.

(2) A record of such inspections and tests shall be maintained by such licensee, and shall be produced on demand by any Inspector.

58. No installation or storage shed shall be open, and no work in any installation or storage shed shall be permitted, between sunset and sunrise except where approved electric lighting as specified in rule 59 is exclusively used.

59. (i) All electric wires installed at less than 15 feet from the ground in any petroleum installation or situated within 20 feet of any building or tank containing dangerous petroleum shall consist of insulated cables, enclosed in metallic coverings which shall be gas tight electrically and mechanically continuous throughout and effectively earthed outside the building.

(2) No electric wire shall pass over any petroleum tank, filling, painting or storage shed.

(3) In filling, painting and storage sheds and pump rooms used for

(i) dangerous petroleum:—

- (a) all electric meters, distribution boards, switches, fuses, plugs and sockets shall be placed outside the building and shall be of flam-proof construction satisfying the requirements of the British Standard Specification No. 229 and the frames shall be effectively earthed;
- (b) all electric fixed lamps shall be enclosed in a well glass flame-proof fitting, either doubly enclosed with an inner and an outer well glass or singly enclosed with substantial metal protection, such lamps shall be installed at 12 feet where possible, but in no case less than 8 feet, above the floor level;
- (c) all electric portable hand lamps of the self-contained pattern shall be of a type approved by the Licensing Authority.
- (d) for the examination of cans and other containers, electric torches employing a separate battery may be used, these torches shall be fitted with substantially protected flame-proof globes and shall be supplied through a cable of cab-tyre or other suitable sheathing and properly constructed flame-proof connectors, and
- (e) no single fixed lamp shall exceed 150 watts.

(ii) non-dangerous petroleum;

- (a) all electric meters, distribution boards switches, fuses, plugs, and sockets shall be enclosed in ironclad, gas-tight cases and shall be fixed at least 5 feet above the floor level in well-ventilated positions close to the door.
- (b) all electric fixed lamps shall be enclosed in a gas-tight well glass fitting provided with substantial metal protection;
- (c) all electric portable hand lamps shall be fitted with substantially protected gas-tight globes and supplied through a flexible cab-tyre or other suitable sheathing and properly constructed gas-tight connectors, and
- (d) no single fixed lamp shall exceed 200 watts and no hand lamp shall exceed 30 watts.

60. No internal combustion engine or electric motor shall be used for driving pumps for pumping petroleum have in a pump house specially

constructed for the purpose and under such conditions as may be approved by the Licensing Authority ;

Provided that this rule shall not apply where the motor control switchgear and starting apparatus are of flame-proof construction satisfying the requirements of the British Standard specification No. 229.

61. Copies of the preceding rules in this Chapter and of the conditions of the license shall be exhibited in a conspicuous place in every licensed installation and storage shed.

62. Nothing in rules 44, 49, 52, 55 and 58 shall apply to petroleum in the possession of the Jammu and Kashmir State Forces.

CHAPTER V.

STORAGE OF PETROLEUM NOT REQUIRING LICENSE.

63. (1) Notwithstanding anything contained in these rules, it shall be permissible to store, without license, subject to the conditions of this Chapter, heavy petroleum in quantities not exceeding 10,000 gallons, which is not stored in the same installation or storage shed as other petroleum.

(2) The provisions of Chapter IV shall not apply to petroleum so permitted to be stored without license under sub-rule (1).

64. (1) Heavy petroleum in bulk, if stored otherwise than under a license, shall be stored in a tank constructed of iron or steel properly erected and designed and the tank with all pipes and fittings shall be so constructed and maintained as to prevent any leakage of petroleum.

(2) All tanks of a capacity exceeding 1,000 gallons shall be surrounded by a bank or wall, or sunk in a pit, so constructed and maintained as to be able to contain without leakage the whole of the petroleum liable to be present at any one time in the tank.

(3) A distance of not less than ten feet shall be kept clear between protected works and the enclosures walls or banks.

(4) Nothing in this rule shall apply to petroleum in the possession of the Jammu and Kashmir State Forces.

65. Heavy petroleum which is not in bulk, if stored otherwise than under a license, shall if the quantity exceeds 500 gallons, be stored in

storage shed of which either—

(a) the doorways and other openings shall be built up to a height of one foot above the level of the floor, or

(b) the floor shall be sunk to a depth of one foot.

66. Every person intending to store heavy petroleum in quantity exceeding 1,000 gallons otherwise than under a licence shall send to the Inspector General of Customs and Excise a prior report stating the situation of the premises on which such petroleum is to be stored.

Prior report of storage of exempted heavy petroleum.

67. (1) Every garage or hangar used for housing any motor conveyance containing dangerous petroleum in bulk in any tank incorporated in the conveyance, whether such petroleum is intended to be used to generate motive power for the conveyance or not, shall be constructed of inflammable material and be effectively and safely ventilated to the open air.

(2) Every such garage or hangar shall be in charge of a competent person who shall be responsible for taking all proper precautions against fire and shall prevent unauthorised persons from having access to the building.

CHAPTER VI.

LICENCES.

68. (1) A person wishing to obtain or to renew a licence prescribed under these rules shall submit an application in writing to the authority empowered to grant such a licence.

Application for licence.

(2) Every application for the grant or renewal of a license to store or to import and store petroleum shall be in Form B.

69. (1) Licences for importation and storage may be granted by the Inspector General of Customs and Excise in the forms for the purposes and on payment of the fees specified in Schedule I,

Grant of licence

(2) A license in Form H may be granted for such period as the Licensing Authority may deem necessary subject to a maximum of 12 months. Every other licence granted or renewed under the rules shall remain in force until the last day of October of the year for which the license is granted or renewed.

(3) an applicant for a new licence may apply to the District Authority for a certificate to the effect that there is no objection to the applicant receiving a licence for the site proposed and the District Authority shall, if he sees no objection, grant such certificate to the applicant who may forward it to the

Licensing Authority with his application in Form B.

(4) The Licensing Authority may refer an application not accompanied by a certificate granted under sub-rule (3) to the District Authority for the observations.

(5) If the District Authority, either on a reference being made to him or otherwise, intimates to the Licensing Authority that any licence which has been applied for should not in his opinion, be granted, such licence shall not be issued without the sanction of the Government.

(6) No licence in Form H shall be granted except to a person holding a license in Form I.

(7) In the case of a licence granted for storage one copy of the plan or plans of the storage premises signed in token of approval by the Licensing Authority shall be attached to the licence and one copy shall be filed for record in the office of the Licensing Authority.

70. Every licence granted under these rules shall be held subject to the conditions endorsed on it and shall contain all the particulars which are contained in the form prescribed for it by these rules

71. Notwithstanding anything contained in rule 70 the Licensing Authority, at the time of issuing a license may omit, alter or add to any of the conditions specified in the prescribed form of license.

Power of licensing authority to alter conditions

72. (1) Any license granted under these rules may be amended by the authority granting such a licence ;

amendment of license

Provided that the amendments shall not be inconsistent with any rule in this Chapter.

(2) A licensee who desires to have his license amended shall submit it to the Licensing Authority with an application stating the nature of the amendment and the reasons there for.

(3) The fee for the amendment of a license shall be one rupee plus the amount (if any) by which the fee that would have been payable if the license had originally been issued in the amended form exceeds the fee originally paid for the license,

73. (1) A license may be renewed by the authority empowered to grant such a license.

Renewal of license

(2) Every application for the renewal of a licence shall be made not less than thirty days before the date on which the license expires, and if the application is so made, the premises shall be held to be duly licensed until such

date as the Licensing Authority renews the license or until an intimation that the renewal of the license is refused has been communicated to the applicant.

(3) The same fee shall be charged for the renewal of a license as for a license.

74. (1) The Licensing Authority refusing to grant, amend or renew a license, shall record his reasons for such refusal in writing.

Refusal of license

(2) A copy of the order containing the reasons for such refusal shall be given to the applicant on payment of a fee of one rupee.

75. (1) Every license granted under these rules shall be liable to be cancelled by order of the Licensing Authority for any contravention of the Act or of any rule thereunder, or of any condition contained in such license.

Cancellation of license

(2) The Licensing Authority cancelling a license shall record his reasons for so doing in writing.

(3) A copy of the order containing the reasons for the cancellation of a license shall be given to the holder of the license on payment of a fee of one rupee.

76. (1) Any person may appeal to the Government from an order of the Licensing Authority refusing to grant, amend or renew a license or cancelling a license.

Appeal.

(2) Every appeal shall be in writing and shall be accompanied by a copy of the order against which the appeal is made.

(3) The appeal shall be presented within 60 days when the order appealed against has been passed by the Licensing Authority.

77. With every license granted for the storage of petroleum a copy of rules 44 to 61 in Chapter IV shall be given free of charge to the licensee.

Supply of rules.

78. (i) Before petroleum is stored in any installation for which a license is being granted for the first time, a certificate shall be furnished to the Licensing Authority to the effect that all enclosure walls and embankments constructed in accordance with the conditions of the license are of such a nature as to ensure safety.

Certificate of safety.

(ii) The certificate shall be signed by an Engineer, accepted as qualified for the purpose by the Licensing Authority.

(iii) When the license is not granted for the first time, but is being granted for an increased quantity of petroleum, a certificate shall similarly be furnished to the Licensing Authority before any quantity of petroleum exceeding the amount which was admissible under the former license is stored in the installation.

79. (1) The holder of a license for the storage of petroleum may, at any time before the expiry of the license, apply for permission to transfer his license to another person.

Transfer of license for storage.

(2) Such application shall be made to the Licensing Authority who shall, if he approves, of the transfer enter upon the license, under his signature, an endorsement to the effect that the license has been transferred to the person named.

(3) A fee of one rupee shall be charged on each such application.

(4) The person to whom the license is so transferred shall enjoy the same powers and be subject to the same obligations under the license as the original holder.

80 (1) If a licensee dies or becomes insolvent or mentally incapable or otherwise disabled, the person carrying on the business of such licensee shall not be liable to any penalty or confiscation under the Act or these rules for exercising the powers granted to the licensee by the license during such time as may reasonably be required to allow him to make an application for a new license in his own name for the unexpired portion of the original license.

Procedure on death or disability of licensee.

(2) A fee of one rupee shall be charged for a new license for the unexpired portion of an original license granted to any person applying for it under this rule.

81. Where a license granted under these rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of one rupee.

Loss of license

82. (1) Every application for the grant or renewal of a license shall be accompanied by the fee payable thereon. If the license is not granted or renewed, the fee shall be refunded.

83. The Government may, by general or special order grant exemption from, or reduction of any fee payable under these rules.

Power to exempt from payment of fees,

84. (1) Every person holding or acting under a license granted under these rules shall produce it, or an authenticated copy of it, at the place to which the license applies, when called upon to do so by any Inspector.

(2) Copies of any license may, for the purposes of this rule, be authenticated free of charge by the authority which granted the license.

85. The District Authority shall inform the Licensing Authority of the action taken by him on any report of infringements of the Act or of these rules which the Licensing Authority may make to him.

CHAPTER VII.

TETRA ETHYL LEAD MIXTURE.

86. Tetra ethyl lead shall not be added to petroleum in such quantity as to render the proportion of tetra ethyl lead to petroleum in excess of one part in 1,000 parts by volume or one part in 450 parts of weight.

87. No person shall import, transport or store any petroleum containing tetra ethyl lead in which the proportion of tetra ethyl lead exceeds one part in 1,000 parts by volume or one part in 450 parts by weight.

88. The Licensing Authority may by an order in writing in special cases permit the proportion of Tetra ethyl lead prescribed in rules 86 and 87 to be increased.

89. Every mixture of petroleum tetra ethyl lead shall be distinctively coloured before being sold to the public.

90. All receptacles containing a mixture of petroleum and tetra ethyl lead shall unless they are in the possession of Jammu and Kashmir State Forces bear a warning in the following terms.

“Warning
This spirit contains lead and should be used as a motor fuel only”.

CHAPTER VIII.

TESTING OF PETROLEUM.

91. (1) In all cases the Sampling Officer shall personally superintend the drawing of the sample.
Drawing of samples. Where the sample is drawn from an original unopened receptacle containing petroleum not in bulk the opening shall be sufficient to admit of the sample being rapidly transferred from the receptacle.

(2) Two bottles, each of the capacity of about 40 fluid ounces, shall be filled to three-quarters of their capacity with the sample and corked. The corks shall be driven home and cut off level with the neck and melted sealing wax shall be worked into the cork and the bottles shall be efficiently sealed.

92. One of the bottles referred to in sub-rule (2) of rule 91 shall be preserved for reference in case of need and the other shall be forwarded to the testing officer.
Forwarding and retention of bottles,

93. (1) When the licensee or his agent has on import of a consignment of petroleum sought permission to unload the same under rules 7 and 8, the Sampling Officer shall obtain samples of all the petroleum which it is intended to unload at the depot ;
Procedure of delivery of samples.

Provided that no sample need be taken of
 (a) petroleum which is declared to be dangerous, or
 (b) petroleum which is covered by a certificate on the prescribed form granted by a Testing Officer appointed by the Government of India, under the Indian Petroleum Rules 1937.

(2) The licensee shall deliver to the Sampling Officer without charge, samples of every variety of petroleum comprised in the petroleum of which samples are to be taken under sub-rule (1) such samples shall, if the Sampling Officer so requires, be taken from the particular receptacles indicated by him ;

Provided that when the petroleum is in cases, sample may be taken as unloading proceeds.

94. The minimum number of samples to be selected of each brand or quality contained in the consignment shall be as follows :
Selection of samples form a consignment.

(i) in cases—one sample for every 10,000 cases or part thereof :

(ii) in casks or drums, declared to be of uniform quality—one sample for every 80,000 gallons or part thereof.

(iii) in bulk or in tanks—one sample for each tank or tank compartment.

95. (1) The Standard Test Apparatus and thermometers shall—

Standard Test Apparatus

(a) agree in every respect with the specifications laid down in Schedule III, and

(b) have been tested and certified by the Board of Trade or the National Physical Laboratory London and marked with the year of test.

(2) The standard thermometers shall be replaced at least once in every three years.

96. When any apparatus for determining the flashing point of petroleum is submitted to the officer, appointed under sub-section (1) of section 15 of the Act for comparison with the Standard Test Apparatus, that officer shall examine the apparatus including the thermometers and the barometers or aneroids.

(2) No certificate shall be granted under section 16 of the Act if :—

(a) the apparatus is in any respect outside the tolerances laid down in Schedule III to these rules or is otherwise defective, or

(b) any thermometer shows readings varying by more than 1 F. at temperature of 76° F. and 125° F. as given by the Standard Test Apparatus : or

(c) any barometer or aneroid shows a variation of more than half an inch from the pressure given by the Standard Test apparatus.

(3) A certificate in Form C shall be granted in respect of any apparatus which has been found to agree with the Standard Test Apparatus within the limits mentioned in sub-rule (2).

(4) A certificate granted under this rule shall be valid for a period of three years.

97. A register of all certificates granted under rules 96 shall be maintained in Form D by the officer appointed under sub-section (1) of section (15) of the Act

Register of certificates,

98. (i) The Testing Officer shall test the samples in the manner laid down in Schedule III to these rules.

Methods of test,

(2) In all cases at least three samples shall be separately tested, the average of the three readings being corrected for the thermometer correction if any, and for the barometric correction in case of dispute.

(3) If the average flashing-point is not lower than 76° F and no one test gives a flashing-point below 75° F the whole of the petroleum represented by the samples shall be deemed to be non-dangerous petroleum.

99. (1) If the Testing Officer, after testing samples taken from a consignment, considers further tests necessary to satisfy himself that none of the petroleum is dangerous, he shall report to the Officer-In-charge of the Customs Post of import accordingly.

Procedure when test
show want of unifor-
mity.

(2) On receipt of a report under sub-rule (1).

(a) when the the consignment is imported in cases, casks, or drums, the Office-In-charge of the Customs Posts shall cause the petroleum in question to be unloaded and stocked in lots of not more than 1500 cases or casks or drums each and the Sampling officer shall select and deliver to the Testing Officer one sample from each lot.

(b) when the consignment is imported in bulk, the Sampling Officer shall forward a second sample and the Officer-In-charge of the Customs Post may, until the receipt of the Testing Officer's further report, prevent the unloading of any portion of the contents of the tank in question or may permit it to be unloaded in anticipation of the Testing Officer's report if the consignee furnishes a guarantee to rebook the petroleum if the Testing Officer's report proves unfavourable.

100. (1) The Testing Officer shall as soon as practicable and ordinarily within twenty four hours after receipt of any sample make out a certificate in Form E and shall forward it to the officer submitting the sample.

Certificate of tests.

(2) The Testing Officer shall, at the request of any person concerned, furnish him with a certified copy of the certificate in Form E issued under sub-rule (1) on payment of a fee of one rupee.

101. (1) The fee for each inspection of the Standard Test Apparatus shall be one rupee.

Fee for inspection and
comparison.

(2) The fees for comparing a privately owned Test Apparatus with the Standard Test Apparatus shall be as

follows :—

	Rs.
Abel Flash Point Apparatus or Pensky Martens Apparatus	30
Baron. ter Point Apparatus or Pensky-Martens Apparatus	10
Thermometer Point Apparatus or Pensky-Mortens Apparatus... ..	10
102. The fee for testing each sample of imported petroleum shall be five rupees.	

Fee for testing.

Provided that the aggregate fee chargeable under this sub rule shall not, in the case of any one chip exceed Rs. 50.

(2) The fee for retesting each sample under section 20 of the Act shall be five rupees. It shall be refunded if the original test is proved to be erroneous.

SCHEDULE I.

Licenses (Vide Rule 69).

Article No.	Form of license.	Purpose for which granted.	Fee.
1	F.	To import dangerous petroleum other than petroleum which can be used in an internal combustion engine, in quantity not exceeding 60 gallons at any one time.	Re. 1.
2	G.	To store dangerous petroleum in quantity not exceeding 60 gallons.	Rs. 4.
3	H.	To store non-dangerous petroleum otherwise than in bulk, in quantity not exceeding 5,000 gallons.	(a) When the quantity to be stored does not exceed five hundred gallons Rs. 8.
	I.	To store petroleum in a tank or tanks in connection with a pump outfit for fuelling motor conveyances.	(b) When the quantity to be stored exceeds five hundred but does not exceed one thousand gallons Rs. 12.
		(c) When the quantity to be stored exceeds one thousand but does not exceed five thousand gallons.	Rs. 12 for the first one thousand gallons plus Rs. 3 for every additional one thousand gallon or part thereof.

Form of
license.

Purpose for which granted.

Fee.

(d) When the quantity to be stored exceeds five thousand but does not exceed 50,000 gallons. Rs. 24 for the first five thousand gallons plus Rs. 5 for every additional 1,000 gallons or part thereof.

5 J. To import dangerous petroleum and to store petroleum in installations. (e) When the quantity to be stored exceeds fifty thousand gallons Rs. 25.

6 K. To import and store dangerous petroleum otherwise than in bulk and to store otherwise than in bulk (a) non-dangerous petroleum in quantity exceeding 5,000 gallons of (b) partly dangerous petroleum and partly non-dangerous petroleum. (f) When the quantity to be stored or imported and stored does not exceed five hundred gallons Rs. 8.

7 Special forms. To import dangerous petroleum and to store petroleum (in cases not provided for in article 1, 2, 3, 4, 5 and 6). (g) When the quantity to be stored or imported and stored exceeds five hundred gallons. The same fees as those laid down for storage of non-dangerous petroleum.

SCHEDULE II.

*Form A (See Rule VII).***Certificate of storage accommodation.**

I hereby declare that I propose to store the following consignments of dangerous/non-dangerous petroleum arriving by Rail/Road on or about the _____ 19 . at the storage tanks or sheds of which particulars are given in capacity 1 and 2 of the statement below and I certify that the quantity shown as available in column 3 of that statement is available for the storage of the said petroleum, and that the said storage tanks and sheds are duly licensed for the storage of the petroleum in question.

*Importer or Agent.**Dated the* _____ *19* .**STATEMENT.**

1	2	3	4
Storage tanks or sheds.	Total capacity of each storage tank or shed.	Capacity available in each storage tank or shed	Capacity to be utilised by present consignment in each storage tank or shed.
	Gallons ...	Gallons ...	Gallons.

Total Gallons ...

From B. (See Rule 68).

Application for the grant/renewal of a license to store or to import and store petroleum.

- | | | | |
|----|---|------------------------------|--|
| 1. | Applicant's Name | ... | The replies to be written
in this column. |
| | Calling | ... | |
| | Address | ... | |
| 2. | Situation of the premises where
petroleum is to be stored :— | | |
| | Province | ... | |
| | District | ... | |
| | Town or village | ... | |
| 3. | Petroleum proposed to be
stored— | | |
| | Nature (<i>i. e.</i> , dangerous,
non-dangerous or
heavy petroleum). | | |
| | Quantity | { In bulk ...
Not in bulk | |
| 4. | Form in which license is
required. | | |
| 5. | Do the premises fulfil all the
conditions endorsed on the
form ? | | |
| 6. | Petroleum already stored on
the premises— | | |
| | Nature | ... | |
| | Quantity | { In bulk ...
Not in bulk | |
| 7. | Dangerous petroleum proposed
to be imported— | | |
| | Quantity | { In bulk ...
Not in bulk | |
| | Remarks | ... | |

Signature of applicant.

Postal address of applicant.

Date of application.

NOTE.—This application if it relates to a new installation or storage shed or if the applicant proposes any alterations in an existing installation or storage shed, must be accompanied by specifications and plans drawn to scale in duplicate. The plans should clearly indicate:—

- (a) the manner in which the conditions prescribed by these rules have been complied with.
- (b) the premises to be licensed, the area of which shall be distinctively coloured or otherwise defined.
- (c) the surroundings and all protected works.
- (d) the position and capacity of all storage tanks, storage and filling sheds and the position of all other buildings and erections forming part of the installation.
- (e) the areas reserved for dangerous petroleum, heavy petroleum and non-dangerous petroleum other than heavy petroleum.
- (f) tanks and other enclosures.
- (g) all pumps, valves, filling and discharge points, vent pipes etc.

FORM C.

(See Rule 96).

Certificate of Apparatus.

_____ Apparatus.

Marked No. _____

Maker's Name _____

Slide No. _____

Thermometer No. _____ Oil Cup.

No. _____ Water Bath.

Cup No. _____

The above apparatus including the thermometers having been submitted for verification with the Standard Test Apparatus was compared by me on _____ and found to agree with it within the prescribed limits.

The following corrections are necessary to the thermometer and barometer or aneroid readings :—

Thermometer No. _____

No. _____

Barometer or Aneroid No. _____

Date _____

Reference _____

SIGNATURE AND DESIGNATION OF THE OFFICER,

appointed under Section 15 (1) of the Petroleum Act, 1998.

FORM D.

(See Rule 97).

Register of certificates of apparatus.

Serial No.	Place at which the apparatus is intended to be used.	Number and date engraved on the apparatus.	Contents of certificate.	Date on which certificate will cease to be valid.

FORM E.

(See Rule 100).

Certificate of tests of petroleum.

Owner _____

Marks _____

Test (1) _____

(2) _____

(3) _____

Average _____ Thermometer

Correction _____

The sample is _____

Petroleum and (in the case of non-dangerous petroleum)
has a flashing point of _____

Place _____

Date _____

Testing Officer.

FORM F.

(Article 1 of Schedule 1).

License to import dangerous petroleum other than petroleum which can be used in an internal combustion engine, in quantity not exceeding 60 gallons at any one time.

No.....

Fee Re. 1.

License is hereby granted to.....to import dangerous petroleum other than petroleum which can be used in an internal combustion engine, not exceeding sixty gallons in quantity at any one time, at....subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall remain in force tiil the..... 19 .

The..... 19 .

*Licensing Authority.***CONDITIONS OF LICENSE.**

1. Dangerous petroleum shall be imported in gas-tight tinned, galvanised or otherwise externally rust-proofed sheet iron or steel receptacles which shall be fitted with well-made filling apertures and well-fitting screw plugs or with screw caps or other caps with metal air-tight under-caps.

2. The receptacles shall have the following thickness of metal:—

Not less than.

Capacity exclusive of the prescribed
air-space.

Not exceeding 2 gallons	... 27 B. G.
exceeding 2 but not exceeding 4 gallons	22 B. G.
exceeding 4 but not exceeding 30 „	18 B. G.
exceeding 30 but not exceeding 45 „	17 B. G.
exceeding 45 gallons.	16 B. G.

3. The receptacles shall be so constructed and secured as

not to be liable except under circumstances of gross negligence or extraordinary accident, to become defective, leaky or insecure in transit and shall bear a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Highly inflammable" or an equivalent warning of the dangerous nature of the petroleum.

4. An air-space of not less than $7\frac{1}{2}$ per cent of its capacity shall be left in each receptacle at the time of filling.

Licence to store dangerous petroleum in quantity not exceeding 60 gallons.

Fee Rs. 4.

This license shall remain in force till the
19 ..
The.....19 ..

Description of the storage shed referred to above.

Date of renewal. Date of expiry. Singnature of Licensing
 Authority .

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. Dangerous petroleum shall be stored only—
 - (i) in a storage shed constructed of suitable unflammable material, the doors and windows may be of wood, or

(ii) in a properly ventilated iron bin of a design approved by the Licensing Authority placed on private ground in the open air.

2. The storage shed shall be adequately ventilated near the ground level and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze mesh not less than 28 to the linear inch.

3. The storage shed shall not form part of, or be attached to any building in which any person resides or works or where persons assemble for any purpose unless it is separated therefrom by a substantial floor or partition which is constructed of unflammable material and has no openings therein.

4. The storage shed, if in any building, shall not be situated under any staircase or under any other means of exit likely to be required to be used for escape in case of fire.

5. Any two storage sheds or bins or other storage premises not more than twenty feet apart, shall be deemed to be one storage shed.

6. No alterations shall be carried out in the storage shed or bin without the previous sanction in writing of Licensing Authority.

7. If the Licensing Authority calls upon the holder of a license, by a notice in writing, to execute any repairs to the storage shed which are in the opinion of such authority, necessary for the safety of the shed, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

8. Dangerous petroleum other than paints, varnishes, lacquers and similar products shall not be kept in any receptacle other than the standard petrol tins of capacity not exceeding two gallons exclusive of the prescribed air-space.

9. All empty receptacles which have contained dangerous petroleum shall except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum vapour.

10. No receptacles shall be repaired on the premises and no person shall repair or cause to be repaired any receptacle in which, to his knowledge, any dangerous petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle has been rendered free from dangerous petroleum and any inflammable vapour.

11. Adequate precautions shall be taken at all time for

the prevention of accident by fire or explosion.

12. Every care shall be taken to prevent any dangerous petroleum escaping into any drain, sewer, harbour, river or watercourse.

13. Adequate precautions shall be taken to prevent unauthorised persons having access to any dangerous petroleum kept and to the vessel which contains or has contained petroleum.

14. Any accident, fire, or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property, shall be reported to the nearest Magistrate or to the Officer-In-charge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

15. Free access to the licensed premises shall be given at all reasonable time to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

FORM H.

(Article 3 of Schedule I).

License to store non-dangerous petroleum, otherwise than in bulk, in quantity not exceeding 5,000 gallons.

No.....

Fee Rs.

License is hereby granted to.....
valid only for the storage of.....gallons of non-dangerous petroleum in the storage shed described below, subject to the provisions of the Petroleum Act 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall remain in force till the.....19 .

The.....19 .

LICENSING AUTHORITY.

Description and location of the storage shed referred to above.

Date of renewal. Date of expiry- Signature of Licensing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

(1) The petroleum shall be stored only in the storage shed which shall be constructed of suitable unflammable material, but the beams, rafters, columns windows and doors

may be of wood. The building shall rest on foundation walls, the walls and floors being suitably finished to form a sump or enclosure not more than 2 feet in depth and capable of receiving and retaining, in cases of accident or emergency, a volume not less than the maximum quantity of petroleum allowed in the building.

2. The storage shed shall not form part of, or be attached to, any building in which any person resides or works or where persons assemble for any purpose unless it is separated therefrom by a substantial floor or partition which is constructed of unflammable material and has no opening in it.

3. The storage shed, if in any building, shall not be situated under any staircase or under any other means of exit likely to be required to be used for escape in case of fire.

4. No alterations shall be carried out in the storage shed without the previous sanction in writing of the Licensing Authority.

5. If the Licensing Authority calls upon the holder of a license, by a notice in writing to execute any repairs to the storage shed, which may, in the opinion of such authority, be necessary for the safety of the shed, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

6. Any two storage sheds not more than 15 feet apart shall be deemed to be one storage shed.

7. Non dangerous petroleum shall be packed in air-tight tins or drums of steel or iron or in other receptacle not easily broken.

8. The drum or other receptacle containing petroleum shall only be opened in the licensed premises and for the time necessary for drawing off the petroleum, and during such drawing off every reasonable precaution shall be adopted for preventing the escape of petroleum or the vapour therefrom.

9. Adequate precautions shall be taken to prevent unauthorised persons having access to any petroleum kept and to any receptacles which contain or have contained petroleum.

10. Adequate precautions shall be taken at all times for the prevention of the accident by fire or explosion.

11. Every care shall be taken to prevent any petroleum

escaping into any drain, sewer, river or watercourse.

12. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property shall be reported to the nearest Magistrate or to the Officer-Incharge of the nearese police station immediately and by telegraph or telephone where such means of communication are available.

13. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and conditions of this license are duly observed.

FORM I

(Article 4 of Schedule I.)

License to store petroleum in a tank or tanks in connection with a pump outfit for fuelling motor conveyances.

No.

Fee Rs.

License is hereby granted to————— valid only for the storage of————gallons of petroleum in a tank (tanks) in the licensed premises described below and shown on the plan hereto attached subject to the provisions of the Petroleum Act, 1998. and the rules made thereunder and to the further conditions on the back of this license.

This license shall be renewable for——— years in the absence of contravention of the provisions of the Petroleum Act, 1998 or of the rules framed thereunder or of any condition of this license.

This licence shall remain in force till the—————
19 .

The—————19 .

LICENSING AUTHORITY.

—————

Plan No.—————*Dated*—————

Description of the licensed premises referred to above. The licensed premises are situated————— and consist of a gas-tight tank (tanks of a capacity of ———— gallons sunk ———— underground.

Date of renewal. Date of exp ry. Signature of Licensing
 Authority.

—————

Conditions of Licence.

1. The petroleum shall be stored in one or more gas-tight metal tanks of a capacity of———gallons sunk completely underground in the position shown on the plan attached hereto and each placed in a masonry or concrete pit, the tank being packed round with sand, earth or clay so that no air-space is left between the tank and the masonry or concrete pit and the tank is not visible. Such masonry or concrete pit shall not be obligatory if the tank is a welded one tested upto a pressure of 3 lbs. per square inch and is buried and is on private, leased or rented land away from public traffic. The space over the buried tanks must not be used for any purpose.

2. There shall no openings in any tank other than those necessary for the introduction or removal of the petroleum or for ventilating or dipping the tank. The filling and dipping pipes shall be carried down nearly to the bottom of the tank.

3. Every tank shall be fitted with a vent pipe leading into the open air. The vent pipe shall be securely supported and shall be not less than 12 feet in height. The upper opening shall be covered with the fine copper or other non-corroding metal wire gauze of mesh not less than 28 to the linear inch and fitted with a hood or the upper opening shall be fitted with an inlet valve and an exhaust valve.

4. After that no pump or tank shall be erected inside a building and if prior to that date any tank is installed inside a building, it shall only be filled from a tank-wagon through an under-ground filling pipe having a filling point in the open air at a distance of not less than 12 feet from the building.

5. No alteration of the position of a pump or tank and no replacement of a tank shall be effected except with the previous sanction in writting of the Licensing Authority. All alterations sanctioned under this condition shall be shown on an amended plan to be attached to this licence.

6. If the Licensing Authority calls upon the holder of a licence by a notice in writing to execute any repairs to the licensed premises which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the licence shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

7. Every tank, before being repaired, shall be cleared of all potroleum and of all inflammable vapours. When a tank in position is open for cleaning or repairs no electric or other

lamps, electric cables or electric fans shall be brought near the manhole of the tank until the tank has been certified in writing to be "gas free" by a qualified Chemist or Engineer. (The inside of the tank may be lighted by the use of mirrors).

8. The petroleum shall enter a tank "under seal" and shall not be supplied to the tank between the hours of sunset and sunrise except by a motor tank-wagon of a type approved by the Inspector General Police for the purpose and with the approval in writing of the Licensing Authority.

9. No artificial light capable of igniting inflammable vapour shall at any time be present in the immediate vicinity of the tank-wagon during the transfer of the petroleum to the tank and no person engaged in such transfer shall smoke. When the underground tank is filled with petroleum from barrels no such light shall be allowed within a distance of 30 feet from the barrels.

10. No petroleum shall be removed from a tank except by means of the pump or pumps at the position marked on the plan hereto attached. Every pump shall together with its connections and fittings be so constructed and maintained as to be gas and petroleum-tight. The pipe connections between the tank and a pump shall be placed under-ground.

11. For the purpose of charging the tanks of motor vehicles the petroleum shall only be supplied by being :—

- (a) pumped through strong metal piping by means of approved pumps into above ground measuring tanks of a capacity not exceeding 30 gallons, fixed in approved position, and run thence through sound hose, fitted with a secure self-closing cock and nozzle, into the tank of motor vehicles, or
- (b) pumped through strong metal piping by means of approved pumps into the above ground service tank of approved capacity, fixed in an approved position, and run thence through strong metal piping into measuring tanks of a capacity not exceeding 30 gallons fixed in approved positions and thence through sound hose, fitted with a secure self-closing cock and nozzle, into the tanks of motor vehicles, or
- (c) pumped by means of approved measuring pumps, fixed in approved positions, through sound hose fitted with a secure tap and nozzle, into the tanks of motor vehicles.

12. Petroleum may be supplied to a motor vehicle between the hours of sunset and sunrise from the pump

provided that (i) lights other than the electric lights of the vehicle receiving the petroleum are extinguished, (ii) the pump and the vehicle are illuminated by electric light or failing this by some other form of lighting and (iii) no light capable of igniting inflammable vapour is situated or brought within twelve feet of the pump or vehicle receiving the petroleum.

13. (a) Petroleum shall not be placed in any motor vehicle while the engine is running and, where the vehicle is licensed for the conveyance of more than six passengers on hire, while any passenger remains in the vehicle, and

(b) persons in and engaged in connection with any motor vehicle shall not be permitted to smoke while it is being refuelled.

14. Except when absolutely necessary for the purpose of condition 7 or for testing the accuracy of the pump's discharge by means of a standard capacity measure, petroleum shall not be filled from the tank or pump into any receptacle other than one clamped or fitted to a motor vehicle.

15. This licence shall be held to cover the use of a portable kerbside-pump outfit for a period of not more than one month in the place of the licensed permanent outfit in the event of the latter being out of order, provided notice in writing is given to the Licensing Authority before the portable pump is taken into use, and conditions of this licence which apply to a portable pump are observed. No petroleum shall be allowed above ground (except that actually in the pump) in any case where the underground tanks can be used in connection with the portable pump by making a temporary connection from the portable pump to the underground tank.

16. In case where portable pumps are used not more than two barrels of petroleum in reserve shall be kept within 20 feet of the pump or on public property nearby.

17. A licensee who stores dangerous petroleum intended for sale may stock in a building within the licensed premises not more than 6 gallons of dangerous petroleum in securely closed two-gallon standard tins, and shall, if so required by the District Authority, stock at least 2 gallons.

18. Adequate precautions shall be taken to prevent unauthorised persons from having access to the petroleum or to the vessels which contain or have contained petroleum.

19. Every person managing or employed on or in connection with the licensed premises shall abstain from any act whatever which tends to cause fire or explosion and which is not reasonably necessary and, to the best of his ability, shall prevent any other person from doing such act.....

20. Every care shall be taken to prevent any petroleum escaping into any drain or sewer.

21. The licensee shall provide for each pump, whether kerbside or portable, a minimum of two tins or drums of dry sand which shall be kept ready for extinguishing fires.

22. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property, shall be reported to the nearest Magistrate or to the Officer-Incharge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

23. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this licence are duly observed.

FORM J.

(Article 5 of Schedule 1.)

Licence to import dangerous petroleum and to store petroleum in installations.

No.

Fee. Rs.

Licence is hereby granted to ————— valid only for the importation of ————— gallons of dangerous petroleum and for the storage of ————— *gallons of petroleum in the place described below and shown on the plan attached hereto subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this licence.

19 This licence shall remain in force till the —————

Gallons.

*Dangerous petroleum in bulk ...

Dangerous petroleum otherwise than in bulk ...

Non-dangerous petroleum in bulk ...

Non-dangerous petroleum otherwise than in bulk ...

Total ...

The ————— 19 .

LICENSING AUTHORITY.

Plan No. ————— Dated —————

Description of the plan referred to above.

Date of renewal. Date of expiry.

Signature of Licencing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. Petroleum shall be kept only in the storage tanks and storage and filling sheds or other approved places within the installation specified for the purpose on the plan attached hereto.

2. (i) The tank or tanks shall be supported on an approved foundation and shall be surrounded by a wall or embankment of substantial construction, or shall be partially sunk in an excavation. The enclosure thus formed shall contain only one of the following classes of petroleum, shall be of dimensions sufficient to contain the quantity of petroleum specified under the class to be stored and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid, whether under the action of fire or otherwise.

(a) Dangerous petroleum 10 percent, more petroleum than the tank or tanks are capable of containing ;

(b) Non-dangerous petroleum other than heavy petroleum the amount of petroleum the tank or tanks are capable of containing ;

(c) Heavy petroleum the amount of petroleum the largest tank in the enclosure is capable of containing ;

Provided that heavy petroleum may be stored in the same enclosure as non-dangerous petroleum other than heavy petroleum if the dimension under (b) above is observed.

(ii) Except for the necessary pipes and valves the space within an enclosure and not occupied by the tank or tanks, shall be kept entirely clear and unoccupied. Alternatively gas-tight metal tanks may be sunk completely underground the tanks being packed round with sand, earth or clay, so that no air-space is left below ground level and the tank is not visible. Tanks so buried shall not be required to maintain the safety distances laid down in condition 8 but the space over the buried tanks must not be used for any purpose. The filling and dipping pipes in an underground tank shall be carried down to the

bottom of the tank.

3. All tanks shall be fitted with a vent pipe leading into the open air, the open end being covered with fine copper or other non corroding metal wire gauze of mesh not less than 28 to the linear inch and fitted with a hood or the tank shall be fitted with an approved relief valve or other approved means for preventing dangerous internal or external pressures being produced.

4. Cast iron valves are not permitted on any tank and all valves in an installation must be permanently marked in a manner clearly indicating the direction of opening and shutting the valve.

5. Pumps shall be placed only in the positions shown on the plan attached hereto and they shall together with all connections and fittings be so constructed and maintained as to prevent leakage of petroleum.

6. Storage or filling sheds shall be constructed of suitable unflammable material. The building shall rest on foundation walls and shall be surrounded by a wall or embankment of substantial construction or the walls and floor shall be suitably finished to form a sump or enclosure not more than 2 feet deep. A combination of these methods is permissible. The enclosure or sump thus formed shall be of sufficient capacity to contain the total quantity of petroleum liable at any time to be present in the building and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid whether under the action of fire or otherwise. In the case of dangerous petroleum or partly dangerous and partly non-dangerous petroleum the enclosure or sump shall be capable for receiving and retaining a volume not less than 5 per cent, in excess of the maximum quantity allowed in the building. The sumps and enclosures must be kept clean and free from any accumulation of inflammable liquids.

7. Every storage or filling shed in which dangerous petroleum is stored or filled shall be adequately ventilated near the ground level immediately above any walls constructed to prevent any leakage of petroleum and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze of mesh not less than 20 to the linear inch.

8. (a) A distance of not less than 100 feet shall be kept clear between (1) a storage tank and any other storage tank, (ii) between a storage tank and a storage or filling shed the distance being measured between the nearest points of the perimeters of the storage tanks or storage or filling sheds, as

the case may be.

(b) A distance of not less than 150 feet shall be kept clear between any storage tank or storage or filling shed and any protected work.

(c) Notwithstanding anything contained in clause (a) or clause (b) —

(i) Where the quantity of dangerous petroleum or partly dangerous and partly non-dangerous petroleum not in bulk to be stored in a storage shed does not exceed 50000 gallons, the following reduced distances may be kept clear between the shed or enclosure wall and (a) any other building forming part of the installation, (b) any protected work, or (c) any storage tank containing non-dangerous petroleum having a capacity not exceeding 30,000 gallons :—

	Feet
Not exceeding 1,000 gallons	... 20
Exceeding 1,000 gallons but not exceeding 10,000 gallons.	30
Exceeding 10,000 gallons but not exceeding 20,000 gallons.	40
Exceeding 20,000 gallons but not exceeding 30 000 gallons.	50
Exceeding 30,000 gallons but not exceeding 40,000 gallons.	60
Exceeding 40,000 gallons but not exceeding 50,000 gallons.	70

(ii) When a storage tank containing non-dangerous petroleum has a capacity not exceeding 100,000 gallons, a distance of not less than 50 feet may be kept clear between it and (a) another such tank of similar or less capacity, or (b) a storage or filling shed containing non-dangerous petroleum.

Such a storage tank and storage or filling shed may, where the total quantity stored does not exceed 200,000 gallons, keep a distance of not less than 50 feet clear between the enclosure wall or embankment and any protected works.

(iii) When a storage tank containing non-dangerous petroleum has a capacity not exceeding 50,000 gallons, a distance of—

(a) for horizontal tanks, not less than one-third

- (b) for perpendicular tanks, not less one-half the height of the tank may be kept clear between it and (a) another such tank or (b) a storage or filling shed wherein non-dangerous petroleum is stored in quantity not exceeding 50,000 gallons.

Such a storage tank and storage or filling shed may, where the total quantity stored does not exceed 100,000 gallons keep a distance of not less than 20 feet clear between the enclosure wall or embankment and any protected works.

(iv) In the case of heavy petroleum a distance of not less than 20 feet may be kept clear between a storage tank and (a) another such tank or (b) a storage or filling shed containing such petroleum and a distance of not less than 50 feet shall be kept clear between such storage tank or filling or storage shed and any protected works. When the total quantity stored in such storage tank and storage or filling shed does not exceed 100,000 gallons, half the distances given in clause (iii) for the like quantity of non-dangerous petroleum other than heavy petroleum may be observed.

9. The distances specified in condition 8 may be reduced by the Licensing Authority in cases where screen walls are provided or other special precautions taken or where there are special circumstances that, in his opinion, warrant the alteration.

10. Notwithstanding anything herein to the contrary when petroleum is stored in an installation at or near wells, pumping stations or refineries, the concessions in clause (c) of condition 8 shall not apply and no storage tank, the capacity of which exceeds 50,000 gallons, or storage or filling shed shall be placed nearer than 300 feet to any still, boiler, furnace or fire. In such an installation all tanks shall be situated in a compact area (a) under a single control, (b) enclosed or capable of being enclosed by one continuous fence, (c) on which there shall be no protected works.

11. No alterations shall be carried out in the installation without the previous sanction in writing of the Licensing Authority. Such alterations so sanctioned shall be shown on an amended plan to be attached to this license.

12. If the Licensing Authority calls upon the holder of a license, by a notice in writing, to execute any repairs to the licensed premises, which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice as may be fixed by the notice.

13. The responsible agent or supervisor referred to in Rule 92 shall not allow any person to enter a tank, which has contained petroleum, unless—

- (a) Such person wears a safety helmet of a description approved by Licensing Authority, or
- (b) (i) the responsible agent or supervisor has certified in writing, as the result of an examination of the tank by himself or by some other competent person, that the atmosphere in the tank is fit for persons to enter, and
- (ii) at least one safety helmet of a pattern approved by the Licensing Authority shall have been kept ready for the instant use at the manhole of the tank which is being cleaned or repaired.

14. No work involving the use of fire, welding or hot rivetting, shall be performed in or on any tank until the tank has been certified in the manner laid down in clause (b) of condition 13 to be free from petroleum vapour. When any water is pumped into or withdrawn from the tank no further work of the above description shall be done until the tank has re-tested and a fresh certificate issued. When a tank is open for cleaning or repairs no lamps of any description either ordinary or electric, electric torches, electric cables or fans other than of a flame-proof type satisfying No. 229 the requirements of the British Standard Specification No. 22 shall be brought near the tank.

15. No person shall repair or cause to be repaired any receptacle or pipe in which, to his knowledge, any petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle or pipe has been rendered free from petroleum and any inflammable vapour ;

Provided that this condition shall not be deemed to prohibit the usual soldering operations connected with the filling and despatching of petroleum receptacles.

16. All empty receptacles which have contained dangerous petroleum shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum and inflammable vapour.

17. Adequate precautions shall be taken at all times for the prevention of accident by fire or explosion.

18. Every care shall be taken to prevent any petroleum escaping into any drain, sewer harbour, river or water course and enclosures or sumps must not be permanently connected with any drain or sewer.

19. Any accident, fire or explosion occurring within the area specified in the license, which is attended with loss of human life or serious injury to person or property shall be reported to the nearest Magistrate or to the Officer-In Charge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

20. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

FORM K.

(Article 6 of Schedule 1.)

License to import and store dangerous petroleum otherwise than in bulk and to store otherwise than in bulk a) non-dangerous petroleum in quantity exceeding 5,000 gallons, or (b) partly dangerous petroleum and partly non-dangerous petroleum.

No.

Rs.

License is hereby granted to _____ valid only for the importation of _____ gallons of dangerous petroleum and _____ gallons of non-dangerous petroleum in the storage shed described below and shown on the plan attached hereto, subject to the provisions of the Petroleum Act 1998 and the rules made thereunder and to the further conditions on the back of this licence.

This license shall remain in force till the 19 .

The

19 .

LICENSING AUTHORITY.

Plan No.

, dated

Description of the storage shed referred to above.

Date of renewal.

Date of expiry.

Signature of
Licensing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. The petroleum shall be stored only in the storage shed which shall be constructed of suitable unflammable material provided that, when only non-dangerous petroleum is stored, the beams, rafters, columns, windows and doors may be of wood. The building shall rest on foundation walls and shall be surrounded by a wall or embankment of substantial construction or the walls and floor shall be suitably finished to form a sump or enclosure not more than two feet deep. A combination of these methods is permissible. The enclosure or sump thus formed shall be of sufficient capacity to contain the total quantity of petroleum liable at any time to be present in the building and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid whether under the action of fire or otherwise. In the case of dangerous petroleum or partly dangerous and partly non-dangerous petroleum the enclosure or sump shall be capable of receiving and retaining a volume not less than 5 per cent in excess of the maximum quantity allowed in the building. The sumps and enclosures must be kept clean and free from any accumulation of inflammable liquids.

2. The storage shed, if it is used for the storage of dangerous petroleum, shall be adequately ventilated near the ground level immediately above any walls constructed to prevent any leakage of petroleum and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze of mesh not less than 28 to the linear inch.

3. If the Licensing Authority calls upon the holder of a license, by a notice in writing to execute any repair to the licensed premises which may, in the opinion of such authority, be necessary for the safety of the premises, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

4. No alteration shall be carried out in the licensed premises without the previous sanction in writing of the Licensing Authority. All alterations shall be shown on an amended plan to be attached to this license.

5. The following distances shall be kept clear at all times between protected works and a storage shed or an enclosure wall used for the storage of dangerous petroleum or partly dangerous and partly non-dangerous petroleum :—

Quantity to be stored.

Distances to be
Kept clear.

Feet

Not exceeding 500 gallons	...	20
Exceeding 500 gallons but not exceeding 1,000 gallons.		25
Exceeding 1,000 gallons but not exceeding 5,000 gallons.		30
Exceeding 5,000 gallons but not exceeding 20,000 gallons.		40
Exceeding 20,000 gallons but not exceeding 30,000 gallons		50
Exceeding 30,000 gallons but not exceeding 40,000 gallons.		60
Exceeding 40,000 gallons but not exceeding 50,000 gallons.		70
Exceeding 50,000 gallons	...	100

6. The following distances shall be kept clear at all times, between protected works and a storage shed or an enclosure wall used for the storage of non-dangerous petroleum only :—

Quantity to be stored.

Distance to be
Kept clear.

Feet

Exceeding 5,000 gallons but not exceeding 10,000 gallons.		15
Exceeding 10,000 gallons but not exceeding 50,000 gallons.		20
Exceeding 50,000 gallons	...	30

7. The distances specified in conditions 5 and 6 may be reduced by the Licensing Authority in cases where screen walls are provided or other special precautions taken or where there are special circumstances that, in his opinion, warrant the reduction.

8. Drums or other receptacles containing petroleum shall only be opened in the licensed premises and for the time necessary for drawing off the petroleum, and during such drawing off every reasonable precaution shall be adopted for preventing the escape of petroleum or the vapours therefrom.

9. All empty receptacles which have contained dangerous petroleum shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum and inflammable vapour.

10. No person shall repair or cause to be repaired any receptacle in which, to his knowledge, any petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle has been rendered free from petroleum and any inflammable vapour ;

Provided that this condition shall not be deemed to prohibit the usual soldering operations connected with the filling and despatching of petroleum receptacles when such operations are conducted in an approved place outside the storage shed.

11. Adequate precautions shall be taken at all times for the prevention of accident by fire or explosion.

12. Every care shall be taken to prevent any petroleum escaping into any drain, sewer, river or water course

13. Adequate precaution shall be taken to prevent unauthorised persons having access to any petroleum kept and to any receptacles which contain or have contained petroleum.

14. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to persons or property shall be reported to the nearest Magistrate or to the Officer-In-charge of the nearest police station immediately and by telegraph or telephones where such means of communication are available.

15. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

SCHEDULE III.

METHODS OF TESTING PETROLEUM.

Determination of Flashing-point.

(See rules 95 and 98)

1. APPARATUS TO BE USED.

The flashing-point of petroleum and petroleum mixtures which are fluid at 50° F and which flash not above 120° F, shall be determined by the Abel Apparatus as hereinafter defined.

The flashing-point of petroleum and petroleum mixtures which are sold at 50° F and which flash, not above 120° F shall be determined by the Abel Apparatus, the test being modified as hereinafter described.

The flashing-point of petroleum and petroleum mixtures which flash above 120° F shall be determined by the Pensky Martens Apparatus as hereinafter defined.

II PREPARING THE SAMPLES FOR TEST

About ten fluid ounces of the sample, sufficient for three tests, should be transferred from the bottle, into which the sample has been drawn to a pint flask or bottle, which should be immersed in water artificially cooled until a thermometer introduced into the sample, indicates a temperature not exceeding 50 F.

III (i) ABEL APPARATUS

The apparatus to be employed shall be the Abel Petroleum Testing Apparatus modified by having an oil cup provided with a stirrer. It shall be constructed to the dimensions here in specified within the limits of accuracy prescribed by the tolerances set forth below.

Oil cup—The oil cup consists of a cylindrical vessel open at the top, and fitted on the outside with a flat circular flange projecting at right angles.

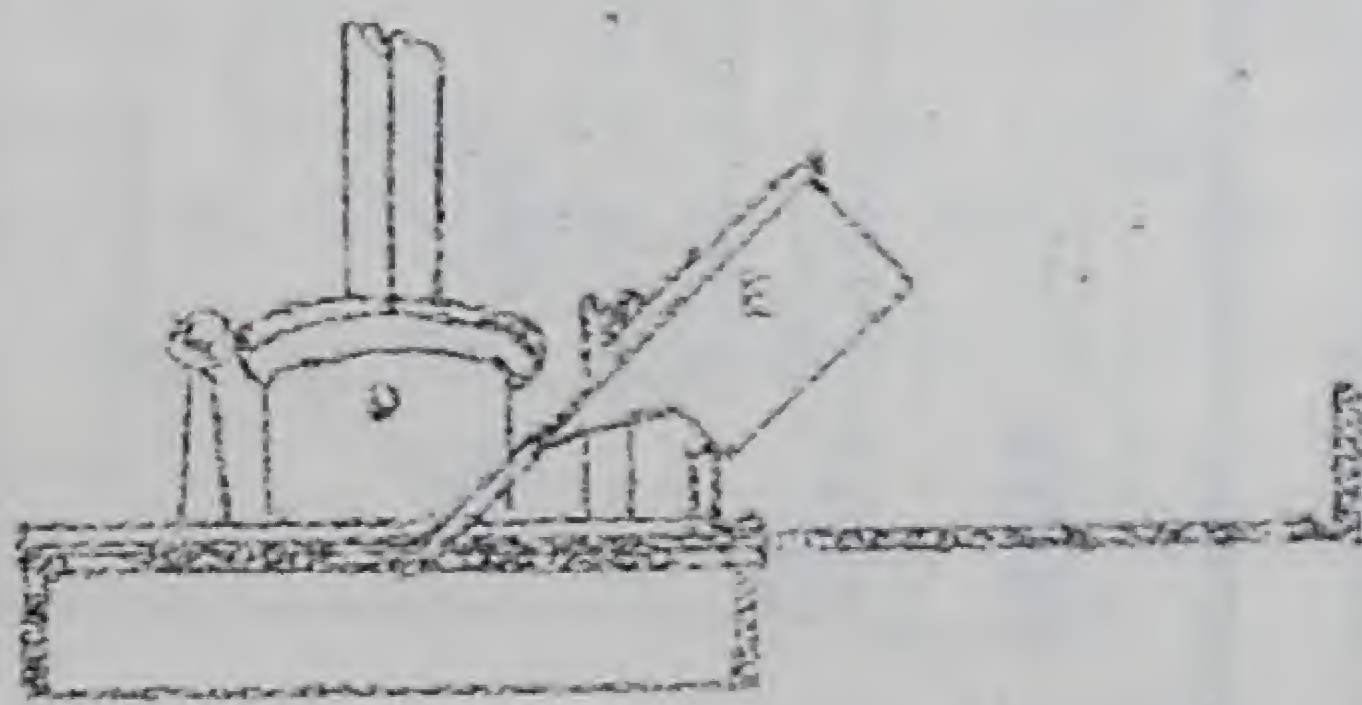
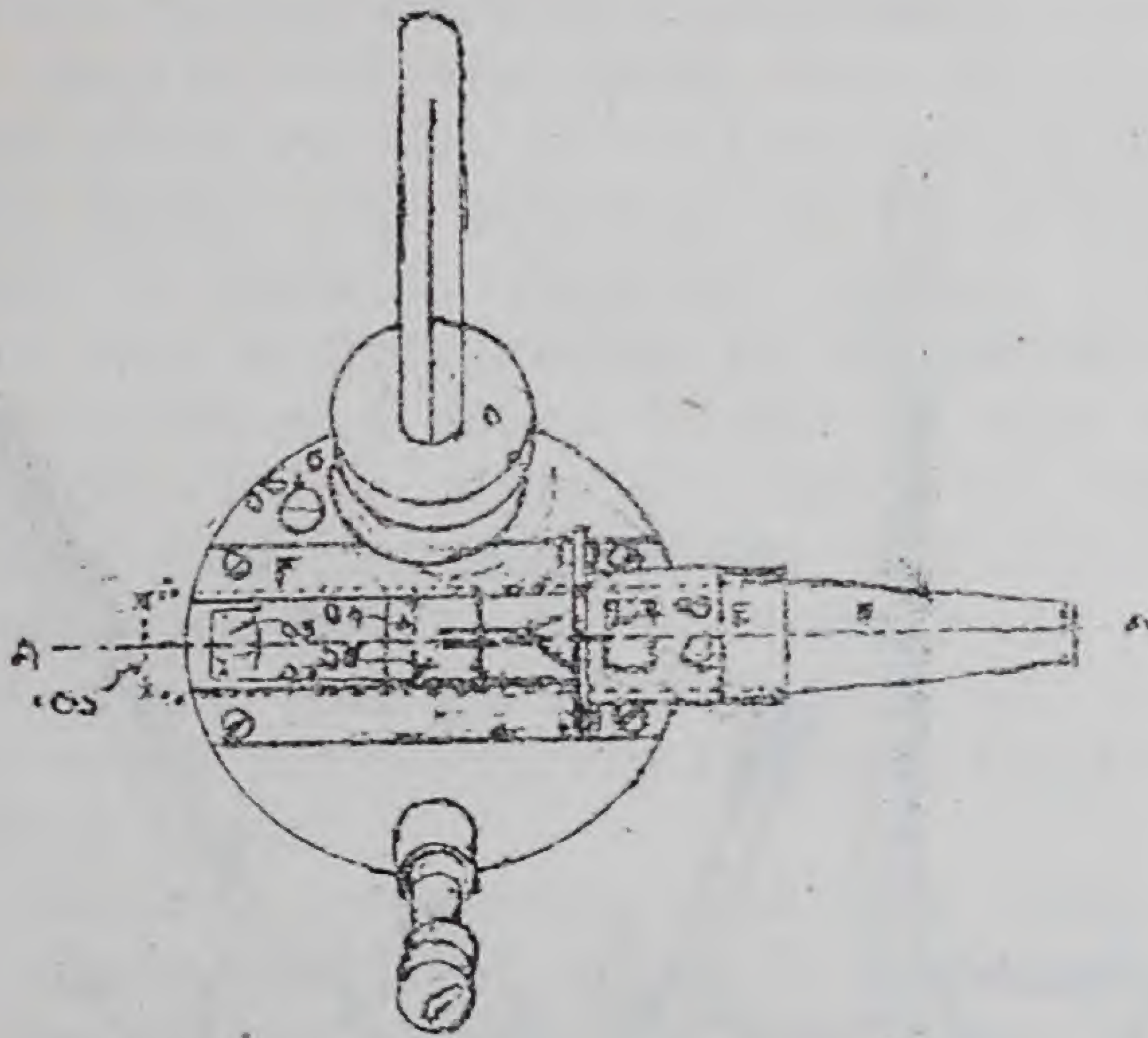
Within the cup, fixed thorough the wall and silver soldered

or brazed in place, there is a gauge consisting of a piece of wire bent upwards and terminating in a point.

Material— Brass or gun-metal.

	Dimension.	Tolerance. in.
Cup, wall and bottom thickness	17 I. W. G.	...
Cup, internal diameter ...	2 in.	$\pm$ 0. 05
Cup, internal depth ...	2 2 in.	$\pm$ 0. 05
Flange, thickness ...	17 I. W. G.	...
Flange width ...	0. 5 in.	$\pm$ 0. 05
Flange, distance of upper side from top edge of cup	0. 375 in.	$\pm$ 0. 05
Gauge, thickness not less than	10 I. W. G.	...
Gauge, distance of point from level of upper edge of cup	0. 7 in.	$\pm$ 0. 005

Cover—The cup provided with a close-fitting cover with a downward projecting rim barely reaching the flange on the cup. The downward projecting rim is made solid with the top or silver soldered.



Section on .AA.

COVER OF ABEL FLASH-POINT APPARATUS.

(Slide open.)

moves, and a white bead. The top of the cover is pierced by three rectangular holes symmetrically placed on a diameter one in the centre and the other two as close as practicable to the inner sides of the cover rim and opposite each other. These three holes are covered or uncovered by means of a slide moving in suitably disposed guides. The slide has two perforations, one corresponding in all particulars to the centre hole in the cover and other to one of the holes at the side. The movement of the slide is restricted by suitable stops, and its length and the disposition of the holes are such, that at the outer extremity of the movement of the slide, the holes in the cover are simultaneously just completely opened and at the inner extremity of the movement of the slide they are completely closed.

--The trunnions supporting the test lamp are fixed on the top of the guides and the lamp is mounted in the trunnions so that it is free to oscillate. The lamp is provided with a jet to contain a wick and is so arranged that when the slide is moved so as to uncover the holes, the oscillating lamp is caught by a pin fixed in the slide and tilted over the central hole in such a way that the lower edge of the cover bisects the circle formed by the bore of the jet when in the lowest position. The flame then occupies a central position within the hole in both directions.

A suitably mounted gas-jet may be substituted for the lamp.

	Dimension.	Tolerance. in.
Cover thickness ...	0.05 in ...	± 0.015 .
Cover, central hole, length (in direction of slide) ...	0.5 ,, ...	± 0.005 .
Cover, central hole, width.	0.4 ,, ...	± 0.005 .
Cover, peripheral holes, length (in direction of slide) ...	0.2 ,, ...	± 0.005 .
Cover, peripheral holes, width ...	0.3 ,, ...	± 0.005 .

	Dimension.	Tolerance. in.
Slide, thickness ...	20 I. W. G.	.....
Slide, width of upper surface ...	0.5 in ...	+ 0.01 (excess only).
Lamp, over all length of jet ...	Approx. 0.6 „ ...	To suit the requirements for the position of the jet when tilted.
Lamp, bore of jet at end.	0.0625 in.	$\pm$ 0.005.
Bead, diameter ...	0.15 in ...	$\pm$ 0.01.
Thermomter Socket Internal diameter ...	0.6 in ...	$\pm$ 0.01.
Length of short side measured from under surface of cover ...	Approx. 0.5 in ...	.....
Length of long side measured from under surface of cover ...	Approx- 0.75 in...	.....
Distance of centre of socket from centre of cover measured on the under side ...	Approx. 0.7 in ...	.....
These dimensions are subject to the correct placing of the thermometer when in position ...	.....	.....
Vertical depth of lowest part of thermometer below centre of under side of cover ...	1.5 in ...	$\pm$ 0.1.

The thermometer socket is in the form of a split tube, mounted on a diameter at right angles to the diameter through the centre of the holes, and fitted at such an angle as to bring the bulb of the thermometer when in place, vertically below the centre of the cover and at the correct distance from it.

A white bead, the dimensions of which represent the size of test flame to be used, is mounted in a visible position on the cover.

Materials.—All parts excepting bead, brass or gun-metal. Bead ivory or other suitable material.

Cover fitted with stirrer.—Provisions may be made in the cover for the reception of a stirrer which projects into the oil cup, for use with viscous materials only.

A bush is mounted on the cover in a position diametrically opposite the thermometer mounting, and its length is such and it is set at such an angle that the stirrer rod clears the oil-level gauge and the blades operate below the level of, and without fouling, the thermometer bulb. The bush is placed as near as practicable to the outer edge of the cover.

	Dimension.	Tolerance. in.
Stem, length, overall ...	4 in	± 0.1
" " lower and to point of attachment of blades ...	Approx. 0.1 in ...	.....
Stem length lower and to upper surface of collar...	1.9 in	± 0.1
Stem, length, upper surface of collar to lower end of thread ...	2 in	± 0.1
Stem, diameter ...	Approx. 0.125 in	.....
" " of collar ...	0.25 in	.....
" thread ...	7 B. A.	.....
Blades, thickness ...	17 I. W. G.	.....

	Dimension.	Tolerance. in.
Blades, length excluding root	... 0.5 in	... ± 0 .
Blades, breadth (all corners of blades rounded)	5/16 in (0.3125 in)	± 0.01 .
Blades, angle	... Approx. 45	... ..
Sleeve, length	... To suit stem giving free rotation with no appreciable vertical play when screwed home	... ..
Diameter of bore	... Sliding fit on stem	... ..
„ „ collar	... Approx. 0.25 in	... ..

The stirrer consists of a round stem having four blades or vanes silver soldered in place at one end. A collar is fixed on the stem so that when the stem is inserted into the bush from below, it is arrested at a position such that the correct length protrudes into the oil cup. The top end of the stem is reduced and screwed.

A longer sleeve having an internally screwed, knurled knob soldered to its upper end, is passed over the upper end of the stem and screwed home. The length of the sleeve is such that a flat-faced collar at its lower end just comes into contact with the upper end of the bush, leaving the stirrer free to rotate without appreciable vertical play.

A flat-headed cylindrical plug is provided for insertion in the bush when the stirrer is not in use.

Material—Brass or gun-metal.

Heating vessel.—The heating vessel or bath consists of two flat-bottomed cylindrical copper vessels placed coaxially one inside the other and soldered at their tops to a flat copper ring, greater in outside diameter than the larger vessel and of smaller inside diameter than the smaller vessel. The space between the two vessels is thus totally enclosed and is used as a water jacket.

	Dimension.	Tolerance. in.
Inner vessel, thickness ...	24 I. W. G. ...	.....
" " internal diameter ...	3 in ...	± 0.05 .
Inner vessel, internal depth ...	2.5 in ...	± 0.05 .
Outer vessel, thickness, not less than ...	24 I. W. G. ...	.....
Outer vessel, internal diameter ...	5.5 in ...	± 0.1 .
Outer vessel, internal depth ...	5.75 in ...	± 0.1 .
Top plate, thickness, not less than ...	20 I. W. G. ...	.....
Top plate, outer flange projection ...	0.375 in ...	± 0.1 .
Top plate, diameter of central hole ...	To suit ebonite or fibre ring-clearance not to exceed 0.1 in ...	.....
Ebonite or fibre ring, internal diameter ...	Easy fit on oil cup ...	.....
Ebonite or fibre ring, external diameter of flange ...	2.75 in ...	± 0.02 .
Ebonite or fibre ring, overall depth of spigot ...	0.25 in ...	± 0.02 .
Ebonite or fibre ring, thickness, flange and spigot ...	0.08 in ...	± 0.005 ,

	Dimension.	Tolerance. in.
Ebonite or fibre ring, screws, C. S. ...	8 B. A, $\times 0.15$ in	.....
Thermometer socket, internal diameter ...	0.6 in	± 0.01 .
Thermometer socket, height from top of plate ...	0.75 in	± 0.05 .

An ebonite or fibre ring of right-angle section is fitted into the hole in the centre of the flat ring forming the top of the bath and, when the apparatus is in use, the oil cup fits into, and its flange rests upon, this ebonite or fibre ring so that the oil cup is centrally disposed within the heating vessel. The ebonite or fibre ring is secured in place by means of six small screws having their heads sunk below the surface of the ring, to avoid metallic contact between the bath and the oil cup.

A split socket, similar to that on the cover of the oil cup, but set vertically, allows a thermometer to be inserted into the water-space. A funnel and overflow pipe also communicate with the water-space through the top plate and two loop handles are provided thereon.

The bath rests upon a cast-iron tripod stand, to the ring of which is attached a cylindrical copper jacket not less than 24 I. W. G. flanged inwards at the top, and of such dimensions that the bath, while resting firmly on the iron ring just touches with its outward projecting flange the inward turned flange of the jacket. Two handles are provided on the outer jacket.

DIAMETER OF THE OUTER JACKET 6.5 INCHES ± 0.1 INCH.

Spirit lamp.—A spirit lamp is provided for raising the temperature of the water bath, but any other suitable means may be employed for this purpose.

Thermometers.—Two thermometers are provided, the one for ascertaining the temperature of the bath, the other for determining the flashing-point.

OIL CUP THERMOMETER.

- Type ... Mercury in glass, nitrogen filled, graduated on the stem, enamel back.
- Length ... Approximately 9 inches.
- Stem ... Diameter 0.24 to 0.28 inch.
- Bulb ... Spherical ; made of normal glass approved by the Board of Trade. Diameter, 0.35 inch $\pm$ 0.05 inch.
- Range ... 50° to 150° F. with expansion chamber. Distance from the bottom of the bulb to the 50° line, 2.75 inches to 3.15 inches. Distance from the 50° line to the 150° line, not less than 4.75 inches.
- Immersion... A Swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 2.40 inches $\pm$ 0.05 in.
- Graduation... Scale graduated in 1° F. divisions. Every 5° and every 10° to be indicated by longer lines. Figured at every 10° in full.
- Marking ... "Abel Oil Cup" : Identification number "Fahrenheit maker's or vendor's name or the trade mark.

WATER BATH THERMOMETER.

- Type ... Mercury in glass, nitrogen filled, graduated on the stem, enamel back.
- Length ... Approximately 9 inches.
- Stem ... Diameter, 0.24 to 0.28 inch.
- Bulb ... Cylindrical, made of a normal glass approved by the Board of Trade, length approximately

0.8 inch. Diameter not to exceed the diameter of the stem.

Range ... 90° to 190° F. with expansion chamber
Distance from the bottom of the bulb to the 90 line 3.95 inches to 4.35 inches. Distance from the 90° line to the 190° line, not less than 3.55 in.

Immersion... A swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 3.5 inches. ± 0.1 in.

Graduation ... Scale graduated is 1°F. divisions. Every 5° and 10° to be indicated by longer lines. Figures at every 10° in full.

Marking ... "Abel Water Bath" : Identification number
"Fahrenheit" : maker's or vendor's name or trade mark.

The brass collar of the thermometer is in each case of the following dimensions :—

Outside diameter—push fit in socket.

Thickness of tube—22 I. W. G.

Thickness of flange—0.1 inch. ± 0.001 inch.

III (ii) METHOD.

(1) For Petroleum flashing below 90°F.

The Test Apparatus shall be placed for use in a position where it is not exposed to currents of air or draught.

The heating vessel or water-bath shall be filled by pouring water into the funnel until it begins to flow out at the spout of the vessel. The temperature of the water at the beginning of the test shall be 130°F., and no heat shall be applied to the water-bath during the test. When a test has been completed and it is desired to make another test the water-bath shall be again raised to 130°F., which may conveniently be done while the petroleum cup is being emptied, cooled and refilled with a fresh sample to be tested. The next test is then proceeded with.

If an oil-test lamp is being used it shall be prepared by fitting it with a piece of flat plated candle. Wick and filling it with colza or rape oil up to the lower edge of the opening of the spout or wick tube. The lamp shall be trimmed so that when lighted it gives a flame of about 0.15 of an inch diameter, and this size of flame, which is represented by the projecting white bead on the cover of the oil-cup is readily maintained by simple manipulation from time to time with a small wire trimmer. A gas test flame may be employed and if so, the size of the jet of flame shall be adjusted to the size laid down above.

The bath having been raised to the proper temperature the cup shall be placed on a level surface in a good light, and the oil to be tested shall be poured into it until the level of the liquid just reaches the point of the gauge which is fixed in the cup. Before a test is begun the temperature of the oil shall be determined and shall be brought to approximately 60°F. The cover with the slide closed shall then to be put on to the cup and pressed down so that its edge rests on the rim of the cup and the cup shall be so placed into the bath or heating vessel, every care being taken to avoid wetting the sides of the cup with the oil. The Thermometer in the lid of the cup has been adjusted so as to have the correct immersion when the brass collar of the thermometer is properly seated, and its position shall not in any circumstances be altered. When the cup has been placed in the proper position, the scale of the thermometer faces the operator.

The test-lamp shall then be placed in position upon the lid of the cup. When the temperature has reached 66°F. the operation of testing shall be begun, the test flame being applied once for every rise of one degree, in the following manner :—

The slide shall be slowly drawn open while a metronome, set at 75 to 80 beats per minute, beats three times and shall be closed during the fourth beat. A pendulum of 24 inches effective length may be used in place of the metronome counting one beat from one extremity of the swing to the other.

The barometric pressure shall be observed and recorded. No corrections shall be made except in case of dispute, when the flashing-point figure shall be corrected according to the following rule :—

For each inch (25.4 mm) below 29.92 in. (760 mm.) barometric reading add 1.6° F to the flashing-point.

For each inch (25.44 mm) above 29.92 in. (760 mm)

barometric reading subtract 1.6°F from the flashing-point.

(2) For petroleum flashing between 90°F and 120°F .

The air-chamber which surrounds the oil-cup shall be filled with cold water at a depth of 1.5 inches and the heating vessel or water-bath filled as usual, but also with cold water. The lamp shall then be placed under the apparatus and kept there during the entire operation, and the temperature of the oil raised at the rate of 2°F to 2.25°F per minute, the testing being carried out as laid down in the previous section, except that the test flame shall first be applied when the temperature has reached 80°F .

(3) For solid petroleum mixtures

Solid petroleum mixtures are to be tested in the Abel Apparatus in the following manner:—

The solid mixture must be cut into cylinders 1.5 inch long and 0.25 inch in diameter by means of a cork borer or other similar cutter having the correct internal diameter. These cylinders are to be placed in the petroleum cup of the testing apparatus in a vertical position in such number as will completely fill the cup. The cylinders must be in contact with one another, but must not be so tightly packed as to be deformed in shape.

Five or six of the cylinders in the centre of the cup must be shortened to 0.5 inch to allow space for the thermometer bulb.

The air bath of the testing apparatus must be filled to a depth of 1.5 inch with water. The water bath must then be raised to, and maintained at, a temperature of about 80°F .

The cup must then be placed in the air bath, and the temperature of the sample must be allowed to rise until the thermometer in the oil-cup shows 75°F ., when the test flame must be applied.

If no flash is obtained, this temperature must be maintained constant in the oil-cup for one hour, at the expiration of which time the test flame must again be applied.

If a flash is obtained, the solid mixture will be subject to the provisions of the Petroleum Act 1934.

(NOTE).—It may in many cases, save time in testing samples of petroleum mixtures to apply the test flame after the sample has been a few minutes in the cup and while still at the temperature of the room in which the test is being carried out; provided that this temperature is below 76°F . If a flash is obtained by this means, it is unnecessary (for the purpose of the Petroleum Act) to proceed with the test at a higher temperature.

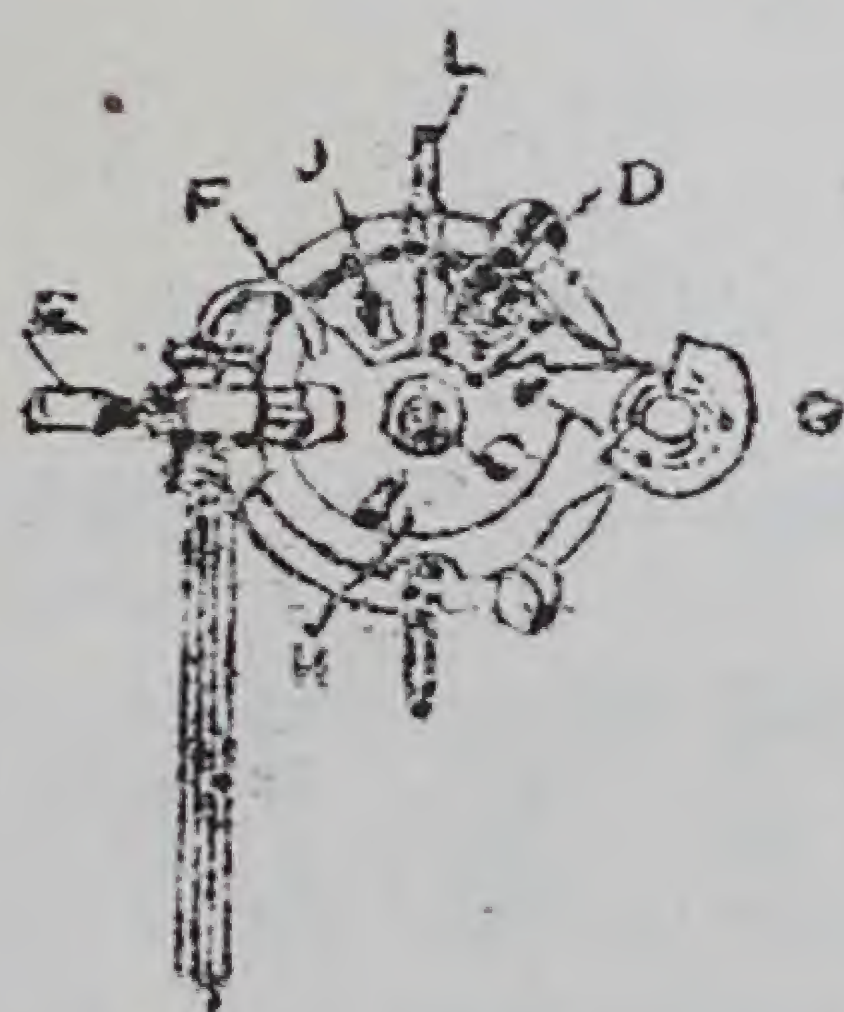
IV (1) The Pensky-Martens Apparatus.

The standard Pensky-Martens Closed Tester shall be used for determining the flashing-point of all petroleum products having a flashing-point above 120°F.

Every instrument shall be marked with the letter I. P. T. an identification number (on the cup, cover and top plate) and the name of the maker or vendor, such stamping implying a guarantee that the instrument complies with the requirements specified below.

The Pensky-Martens Tester shall include the following major parts:

Cup.—The cup of the standard Pensky-Martens Tester shall be made of brass and shall satisfy the following dimensional specifications :—



A. Oil cup B. Heating vessel

C. Stirrer. D. Thermometer

E. Ignition burner

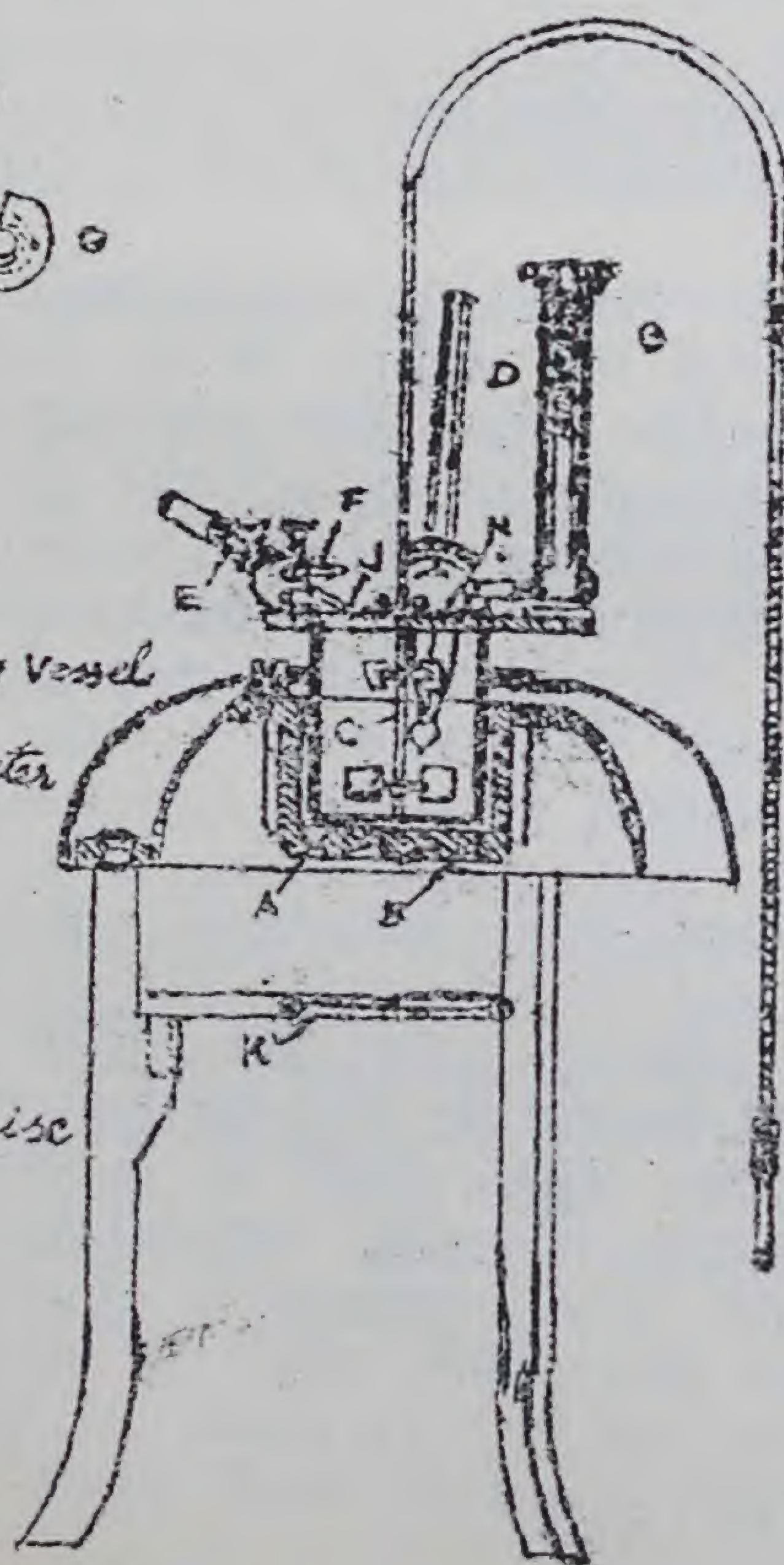
F. Pilot burner

G. Spring handle.

H. Revolving shutter.

J. Orifice. K. Gauge disc

L. Lifting Hooks.



INCHES.

Dimensions.	Normal.	Tolerance in.
Inside diameter below filling mark ...	2.000	± 0.050
Difference inside and outside diameters below filling mark ...	0.125	± 0.010
Inside height ...	2.200	± 0.050
Thickness of bottom ...	0.095	± 0.025
Distance from rim to filling mark ...	0.860	± 0.015
Distance lower surface flange to bottom of cup	1.795	± 0.150

The inside of the cup may be turned to a slightly larger diameter above the filling mark and the outside may be tapered above the flange, but the wall thickness at the upper edge shall be not less than 0.04 in. The flange should be approximately 0.5 in wide and approximately 0.125 in thick.

It shall be equipped with devices for locating the position of the lid on the cup and the cup centrally in the stove. A handle, attached permanently to the flange of the cup is a desirable accessory.

NOTE.—If the bottom of the cup is affixed it shall be braced or hard soldered.

Stirring device.—The lid shall be equipped with a stirring device consisting of a vertical steel shaft, not less than 0.1 in nor more than 0.125 in in diameter, mounted in the centre of the cup, carrying two-bladed brass propellers, and provided with any convenient means for operating. The blades of both propellers shall be approximately 0.3 in wide and shall be set at an angle of approximately 45°. The smaller (upper) propeller shall have an over-all diameter of

approximately 0.75 in. The larger (lower) propellers shall have an over-all diameter between 1.25 and 1.75 in. The thickness of the propeller blades shall be not less than 0.048 in nor more than 0.08 in., which limits correspond respectively to No. 18 and No. 14 S. W. G. The propeller blades shall be brazed or hard soldered to collars on the vertical shaft and the collars shall have horizontal and vertical dimensions not greater than 0.4 in.

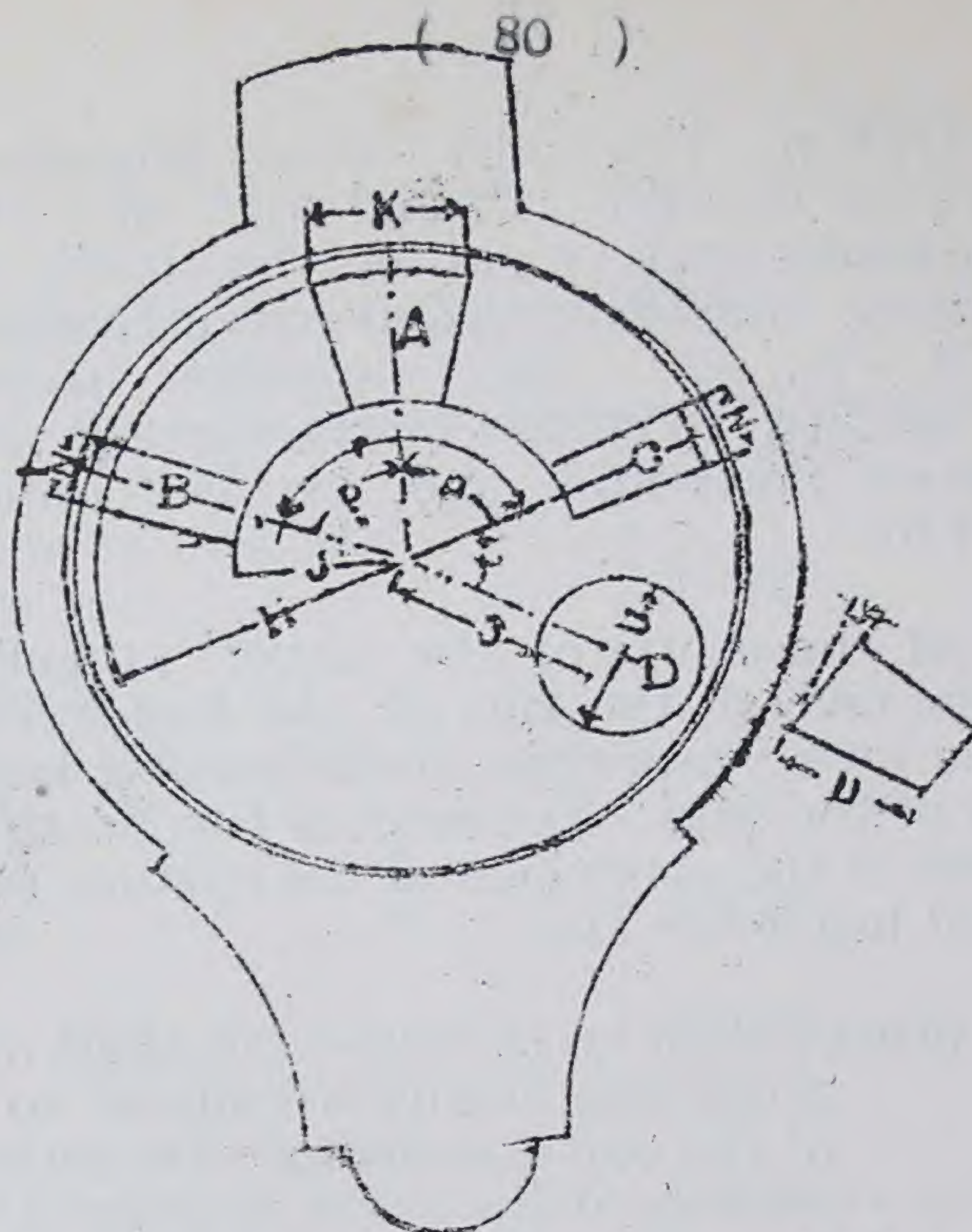
The plane of the centre of the upper propeller shall be 0.4 in., below the level of the rim of the cup. The plane of the centre of the lower propeller shall be 2.0 in., below the level of the rim of the cup. The level of the rim of the cup is in effect the level of the plane part of the portion of the lower surface of the lid inside the rim.

The cover proper shall be of brass and shall have a rim projecting downward almost to the flange of the cup and fitting the outside of the cup closely. The thickness of the cover, measured just inside the rim, shall be not less than 0.03 in., nor more than 0.08 in. There shall be a proper locating device engaging with a corresponding locating device on the flange of the cup.

There shall be four openings in the cover.

Opening A is an area defined by arcs of two concentric circles and the intersected lengths of two radii. The radius of the outer circle shall be not less than 0.94 in., nor more than 0.97 in. The chord of the arc of the outer circle shall be not less than 0.5 in. nor more than 0.54 in.

Opening B and C are equal areas each of the same general form as opening A but of approximately half the (angular) width. The radii of the defining inner and outer circle shall be within the limits specified for the radii of the two circles, arcs of which partially define opening A. The chord of the outer arc for opening B or opening C shall be not less than 0.19 in nor more than 0.22 in. The sum of the areas of openings B and C shall be not less than 75 per cent nor more than 100 per cent of the area of opening A.



H Minimum 0.94 in., maximum 0.97 in.

J „ 0.53 „ „ 0.56 „

K „ 0.50 „ „ 0.54 „

N „ 0.19 „ „ 0.22 „

S Approximately 0.75 in.

U „ 0.5 „

Angles p Equal.

Angle r Minimum 135° maximum 140° .

„ t „ 50° „ 60° .

„ y „ 10° „ 15° .

COVER OF PENSKY-MARTENS TESTER.

Openings B and C shall be equally distant from opening A and radii drawn through each of their centres shall be at an angle of not less than 135° nor more than 140° .

Openings A, B and C need not conform exactly to the shape of geometrical figures bounded by arcs of two concentric circles and intersected length of radii. Their boundaries must, however fall on or between the lines indicated by the limiting values of the dimensional specification of the preceding text.

Opening D is a split tube to grip the thermometer collar. It shall be set at an angle of not less than 10° nor more than 15° from the perpendicular. Its centre is approximately 0.75 in., from the centre of the lid and on a radius at an angle of not less than 50° nor more than 60° from the radius passing through the opening C. Its height shall be such that when a standard thermometer is in position, the bottom of the bulb shall be 1.5 in., ± 0.1 in., below the level of the rim of the cup (which corresponds to the lower surface of the portion of the lid inside the rim).

The lid shall be equipped with a brass shutter approximately 0.1 in., thick, operating on the plane of the upper surface of the lid. The shutter shall be so shaped and mounted that it rotates on the surface of the lid about an axis normal to the lid, and through its centre, between two stops so placed that when in one extreme position the openings A, B and C of the lid are completely closed and when in the other extreme position these openings are completely opened.

The tip of the flame jet shall have an orifice 0.027 in. to 0.03 in. diameter. The flame exposure device shall be equipped with an operating mechanism which, when the shutter is in the "open" position, depresses the tip so that the centre of the orifice is between the plane of the under and upper surfaces of the lid proper at a point on a radius passing through the centre of the larger opening A and approximately 0.1 in. from the outer edges of the opening.

The test flame shall be approximately spherical and shall be regulated to be of the same mean diameter as a bead 0.16 in., in diameter of some suitable material mounted on the lid.

The mechanism operating the shutter should be of the spring type and constructed so that when at rest the shutter shall completely close the three openings. When operated to the other extreme the three openings in the lid shall be fully open and the tip of the exposure tube shall be fully depressed.

NOTE.—A pilot for automatic relighting of the test flame should be provided.

Where gas is not available, an oil burner shall be used as

the test flame, the position of which shall correspond with that of the gas flame previously specified.

Heat shall be supplied to the cup by means of a properly designed stove which is equivalent to an air bath. This stove shall consist of

Stove:—

(1) an air bath and (2) a top plate on which the flange of the cup rests.

The air bath shall have a cylindrical interior 1.625 in., to 1.56 in. deep and a diameter not less than

Air bath:—

0.125 in., nor more than 0.156 in., greater than the outside diameter of the cup, with the minimum clearance of 0.05 in. The air bath shall be a flame-heated metal casting.

NOTE —The casting shall be so designed and used that the temperature of bottom and walls is approximately the same. On this account it should be not less than 0.25 in. thick. The apparatus shall be designed so that products of combustion of the flame cannot come into contact with any part of the cup.

Top plate.—The top plate shall be of metal. The total distance from the upper surface of the plate to the bottom of the air bath shall exceed the distance from the under surface of the flange to the bottom of the cup by not less than 0.063 in nor more than 0.125 in.

The top plate shall be mounted with an air gap between it and the air bath. The top plate may be attached to the air bath by means of three screws and spacing bushings. The spacing bushings should be of proper thickness to define the air gap which shall be not less than 0.125 in nor more than 0.187 in. The spacing bushings shall be not more than 0.375 in diameter.

A low range thermometer shall be used with the Standard

Thermometers.

Pensky-Martens Tester for determining the flashing point above 120 F. The thermometer shall comply with the specification given below:—

The thermometers shall conform to the following general specifications:—

Type.

Mercury in glass, except where otherwise stated. Engraved stem. Nitrogen filled.

Stem.

The stem shall be made of lead glass or other suitable glass Enamel back.

The bulb, shall be made of a suitable thermometric glass approved by the National Physical Laboratory. At present these glasses

Bulb.

are ;—

	Identification mark.	Approved for temperatures upto.
Normal glass made by James Powel and Sons Ltd.	Single blue stripe.	350°C.
Normal glass made by Frank Tomay and Co. Ltd.	Two blue Stripes.	350°C.
Normal glass Jena III made by Schott and Genossen.	Purple stripe ...	350°C.
Normal glass Gege Eff. Made by Glaswork Cuxtav Fischer.	Blue and a red stripe.	350°C.
Corning Borosilicate made by Corning Glass Co.	... ..	450°C.
Jena 59 iii made by Schott and Genossen.	... ..	450°C.
Jena 2954 iii made Schott and Genossen.	Single black stripe.	450°C.

No contraction chamber shall be above the immersion line and no enlargement of the bore shall be within 10 mm. of the immersion line or of any part of the scale.

The graduation lines shall be clearly etched, and of uniform thickness not exceeding 0.15 mm. The lines shall all be at right angles to the axis of the thermometer. When the thermometer is viewed from the front and in a vertical position the lines shall all finish on a line parallel to the axis on the left hand side. Certain of the graduation lines shall be extended on the right hand side but the shortest graduations shall not extend across the bore. When the diameter of the tube permits the figures shall be upright when the thermometer is viewed from the front and in a vertical position, and should preferably be placed so that they would be intersected by the line to which they refer if it were extended.

In addition to the special markings given in the table, each thermometer shall be marked with an identification number, and the maker's or

Marking.

veador's name or trade mark :—

Name and special marking

... "I. P. T. P. M. — Low"

Dimensions-stem, diameter

...

6.7 mm.

Bulb, shape

...

Round.

Bulb, length

...

.....

Bulb, diameter

...

8 mm. max.

Overall length ± 5 mm

...

275 mm.

Length of graduated portion

...

150-180 mm.

Distance, bottom of bulb to 20° mark...

70-85 mm.

Range

...

20°F. to 230°F.

Graduation

...

1°F.

Longer lines at each

...

5°F. and 10°F.

Figured at each

...

10°F.

Expansion chamber

...

Required

Immersion

...

2.2 in.

Top finish

...

Glass ring.

Each thermometer shall be mounted securely in a thermometer collar so that from the under-side of this collar to the bottom of the bulb the distance is 2.1 in. (± 0.05 in.) The thermometer collar shall have an outside diameter of 0.5 in., ± 0.002 in., and a flange 0.1 in., ± 0.01 in., in thickness. The cement used to fasten the thermometer into the collar shall be of such a nature that it will withstand the action of oil up to the highest temperature at which the thermometer is used.

DRYING OF THE SAMPLE.

If gas oil or fuel oil is being tested, the sample shall be dried by the following methods :—

One hundred grams of well-dried granular calcium chloride is placed in a dry wide mouth stoppered glass bottle.

Two hundred and fifty millilitres of the oil is then poured upon the calcium chloride. The stopper is secured in position by tying. The bottle is then well shaken and is stored in a vessel of water, the level of the water being upto about one third of the height of the oil in the bottle. The water is next raised to a temperature of 50°C . (120°F .) and is maintained at this temperature for a period of seven hours. The bottle and its contents being well shaken up at intervals of about an hour. At the end of this treatment the bottle and its contents are allowed to cool to atmospheric temperature; the bottle is then opened and sufficient of the oil for test filtered through paper on a Buchner funnel.

IV. (II) METHOD.

All parts of the cup and its accessories shall be thoroughly clean and dry before starting the test. Particular care should be taken to avoid the presence of any gasoline or naphtha used to clean the apparatus after a previous test.

The cup shall be filled with the oil to be tested upto the level indicated by the filling mark.

The lid shall be placed on the cup and the latter set in the stove. Care should be taken to have the locating devices properly engaged. The thermometer shall be inserted.

The test flame shall be lighted and adjusted so that it is of the size of a bead 0.16, in diameter.

Heat shall be supplied at such a rate that the temperature read on the thermometer increases not less than 9 or more than 11 degrees per minute. The stirrer shall be turned at the rate of approximately 60 revolutions per minute.

Applications of the test flame shall be made at each temperature reading which is a multiple of 20°F upto 220°F . For the temperature range above 220°F ., application shall be made at each temperature reading which is a multiple of 5°F . The first application of the test flame shall be made at a temperature at least 50°F ., below the actual flashing-point. Application of the test flame shall be made by operating the device controlling the shutter and test flame burner so that the flame is lowered in one half second, left in its lowered position for one second, and quickly raised to its high position. Stirring shall be discontinued during the application of the test flame.

The flashing point is taken as the temperature read on the thermometer at the time of the flame application that causes a distinct flash in the interior of the cup. The true flash must not be confused with the bluish halo that some-

time surrounds the test flame for the application preceding the one that causes the actual flash.

The barometric pressure shall be observed and recorded. No corrections shall be made except in case of dispute, when the flashing-point figure shall be corrected according to the following rule :—

For each inch (25.4mm) below 29.92 in., (760mm) barometric reading add 1.6°F to the flashing point.

For each inch (25.4 mm) above 29.92 in., (760 mm.) barometric reading subtract 1.6°F . from the flashing-point.

V. THE FLASHING-POINT.

If a flash takes place at any temperature below 76°F ., the temperature at which it occurs is noted. Two fresh portions of the sample are then to be successively tested in a similar manner and the results recorded. If no greater difference than two degrees Fahrenheit exists between any two of the three recorded results and if in no instance the flash has taken place within eight degrees Fahrenheit of the temperature at which the testing was commenced, the average of the three readings gives the flashing-point recorded by that particular instrument, but without either apparatus correction or thermometer correction. In the event of there being a greater differences than two degrees Fahrenheit between any two of the readings, or if the flash has occurred within 8 degrees of the temperature at which the testing was commenced, the series of tests is to be rejected and a fresh series of three similarly obtained.

If, however, a flash has occurred at or below 64°F ., when the test was applied in the manner above described, the next test shall be commenced 10°F ., lower than the temperature at which the flash had been previously obtained, and this procedure shall be continued until the results of three consecutive tests do not show a greater difference than two degrees Fahrenheit and until a flash has not occurred in any of the three tests within eight degrees Fahrenheit of the temperature at which the test was commenced. Provided always that if at the commencement of the series of tests a flash has occurred on the first application of the test flame at 66°F ., and if a flash has also occurred on the first application of the flame in each of the three successive tests in which the test flame is first applied at 66°F ., as above directed the testing officer shall certify that the petroleum has a flashing point below 67°F ., and the sample shall be reported as "dangerous petroleum".

If a temperature 76°F ., has been reached without a flash

occurring, the application of the test flame is to be continued at every degree rise of temperature until a temperature of 89°F., has been reached. If no flash occurs upto this point the test shall be continued on a fresh sample as in Section III (ii) (2) above.

If no flash occurs upto 120°F., the flashing-point shall be determined by the Pansky-Martens Apparatus and method as described above,

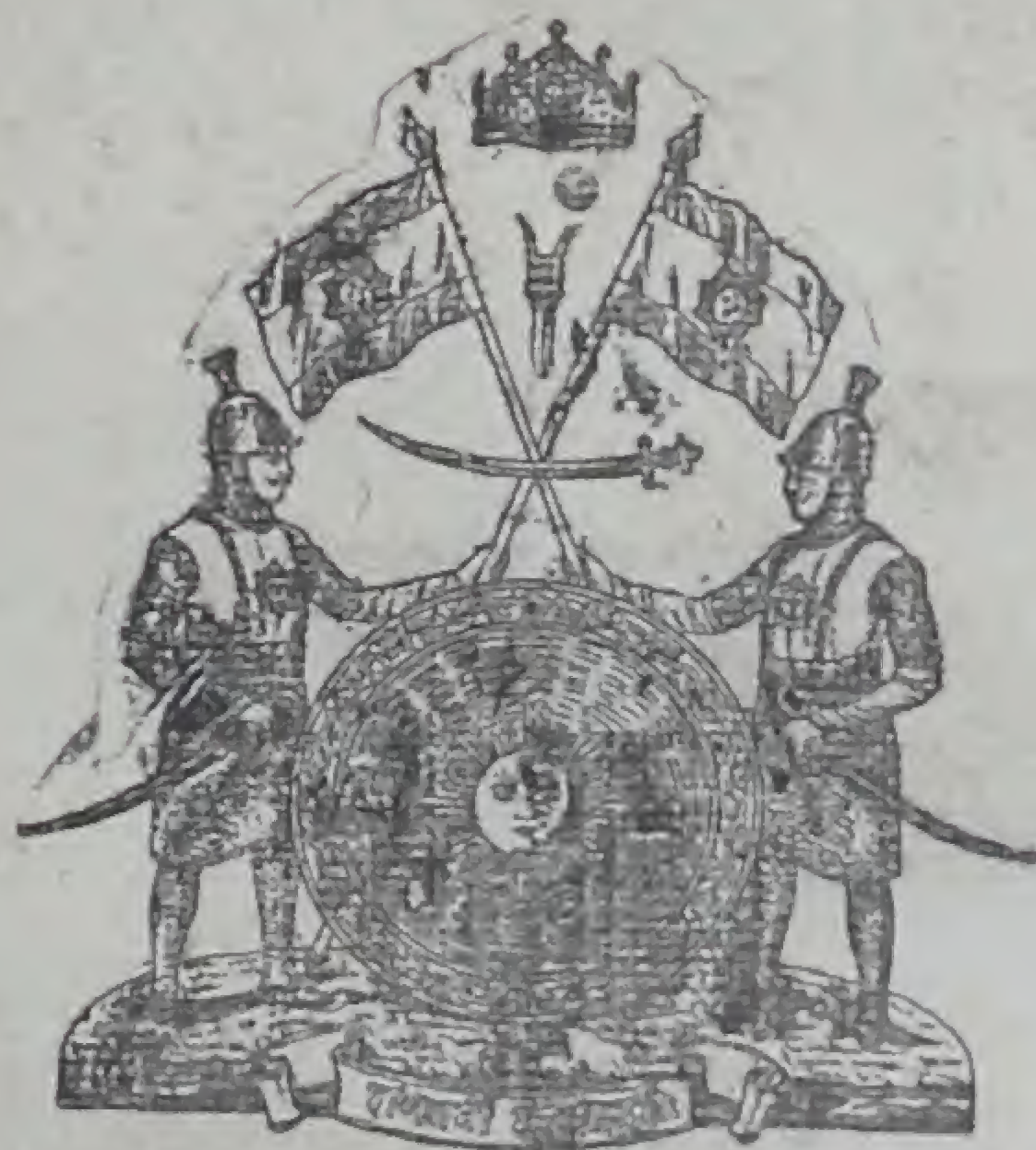
(Sd.) FERROZ DIN,

Revenue Secretary.

HIS HIGHNESS' GOVERNMENT, JAMMU AND KASHMIR.

ORDER NO. 1006-C OF 1942.

RULES UNDER THE PETROLEUM ACT OF 1938.



[Handwritten signature]

JAMMU:

Printed at The Ranbir Government Press—25-9-99—301.

1943.

HIS HIGHNESS' GOVERNMENT JAMMU AND KASHMIR

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SUBJECT :—*Rules under the Petroleum Act of 1938 Memo-
randum No. C-432 dated 17th July 1942.*

COUNCIL ORDER NO. 1006-C OF 1942.

29th September 1942.

Sanction is accorded to the publication of the Rules and
Notifications forming annexures to this order.

By order in Council,

(Sd.) N. GOPALASWAMI,

PRIME MINISTER.

CA
[Signature]

NOTIFICATION.

No.——

In exercise of the powers conferred by sub-section (1) of section 14 of the Jammu and Kashmir Petroleum Act, 1998, Government are pleased to authorise the officers mentioned in the first column of the schedule attached hereto to enter any place in the areas specified in the second schedule hereto where petroleum is being imported, transported, stored, produced, refined, or blended and to inspect and take samples for testing of any petroleum found therein.

Officers.

Areas.

1. All District Magistrates.	} The respective areas over which their authority extends.
2. All Sub-Divisional Magistrates.	
3. All Customs and Excise Officers not below the rank of an Assistant Inspector.	

(Sd.) FERROZ DIN,

Secretary to Government, Revenue Department.

NOTIFICATION

No.——

In exercise of the powers conferred by sub-section (1) of section 13 of the Jammu and Kashmir Petroleum Act, 1998, Government are pleased to authorise the officers mentioned in the first column of the schedule attached hereto to enter any place in the areas specified in the second column of the schedule hereto where petroleum is being imported, stored, produced, refined or blended or is under transport and inspect all receptacles and appliances used in connection with

petroleum in order to ascertain if they are in accordance with the provisions of Chapter I of the said Act and the rules made thereunder.

Officers.

Areas.

- | | | |
|--|---|---|
| <ol style="list-style-type: none"> 1. All District Magistrates. 2. All Sub-Divisional Magistrates. 3. All Police Officers not below the rank of Inspector. 4. All Customs and Excise Officers not below the rank of Assistant Inspector. | } | <p>The respective areas over which their authority extends.</p> |
|--|---|---|

(Sd.) FERROZ DIN,

Secretary to Government Revenue Department.

NOTIFICATION.

No.—

In exercise of the powers conferred by section 17 of the Jammu and Kashmir Petroleum Act, 1998 Government are pleased to authorise the officer noted below to test petroleum of which samples have been taken under the said Act which have been submitted to him for test by any person, and to grant certificates of the result of such tests.

Officer.

-
1. Chemical Examiner His Highness' Government, Jammu and Kashmir.

(Sd.) FERROZ DIN,

Revenue Secretary.

NOTIFICATION.

In exercise of the powers conferred by section 31 of the Jammu and Kashmir Petroleum Act, 1998 (XIV of 1998) the Government are pleased to restrict the operation of the provisions of the Jammu and Kashmir State Municipal Act, 1998 in so far as the said Act relates to the storage of Petroleum which has its flashing point below 200° Fahrenheit to the following quantities, namely:—

1. In the case of dangerous petroleum not intended for sale. Not exceeding six gallons.

Provided that it is kept in securely stoppered receptacles of glass, stoneware or metal, not exceeding one quart in capacity in the case of receptacles of glass or stoneware and not exceeding five gallons in capacity, in the case of receptacles of metal.

- (II) in the case of non-dangerous petroleum, having its flashing point below 150° Fahrenheit. Not exceeding five hundred gallons.

Provided that it is contained in receptacles not exceeding two hundred gallons in capacity.

- (III) in the case of non-dangerous petroleum having its flashing point not below 150° Fahrenheit but below 200 Fahrenheit. Not exceeding ten thousand gallons.

Provided that it is not stored in the same installations or storage shed as other petroleum and it is exempt from licence under Chapter V of the Rules issued under the Petroleum Act, 1998.

(Sd.) FERROZ DIN,

Revenue Secretary

THE JAMMU AND KASHMIR PETROLEUM RULES 1998.

NOTIFICATION.

No.....dated.....194 .

In exercise of the powers conferred by section 4, subsection (2) of section 14, sections 21 and 22 and subsection (1) of section 29 of the Jammu and Kashmir Petroleum Act 1998 (XIV of 1998) the Government are pleased to make the following rules.

Rules.

CHAPTER I.

PRELIMINARY.

1. These rules may be called the Jammu and Kashmir Petroleum Rules, 1998.
Short title.
2. (1) All notifications and rules issued and all appointments made by the Government under the Petroleum Act, 1977 (Act No. XXXII of 1977) are hereby superseded, but
Supersession and savings.
(i) all licenses or duplicates granted or renewed and all fees imposed or levied shall be deemed to have been respectively granted, renewed, imposed or levied under these rules; and
(ii) all approval given and all powers conferred by or under any notification or rules so superseded shall so far as they are consistent with the Act and these rules, be deemed to have been given or conferred by or under these rules.
(2) Anything not in conformity with these rules which was permitted to be done by or under any rules in force immediately before the coming into force of these rules and which under these rules, may be permitted by the Licensing Authority to be done, shall be deemed to have been so permitted by the Licensing Authority unless the Licensing Authority after such notice of his intention as he considers reasonable, declares that it is not so permitted.
3. In these rules, unless there is anything repugnant in the subject or context :—
Definitions,
(a) "The Act" means the Jammu and Kashmir Petroleum Act, 1998.

(b) "Licensing Authority" means the Inspector General of Customs and Excise.

(c) "District Authority" means the District Magistrate.

(d) "Heavy Petroleum" means petroleum which has its flashing point not below 150° F.

(e) "Inspector" means an officer authorised by the Government under sub-section (1) of section 13 of the Act ;

(f) "Installation" means any premises within which any place has been specially prepared for the storage of petroleum in bulk, but does not include a well-head tank ;

(g) "Petroleum in bulk" means petroleum contained in a receptacle exceeding two hundred gallons in capacity ;

(h) "Protected works" includes—

(a) buildings in which persons dwell or assemble, timber yards and buildings or places where petroleum is stored and

(b) any public road or other place which the Inspector General of Custom and Excise has by written order declared to be a protected work, but does not include any building or place which forms part of an installation ;

(i) "Sampling Officer" means an officer authorized by the Government under sub-section (1) of section 14 of the Act ;

(j) "Storage Shed" means a building used for the storage of petroleum otherwise than in bulk, whether it forms or does not form part of an installation, but does not include a building used for the storage of petroleum exempt from licence under sections 7, 8 or 9 of the Act ;

(k) "Testing Officer" means an officer authorized by the Government to test petroleum under section 17 of the Act ; and

(l) "well-tank head" means a tank into which crude petroleum flowing or being pumped from a well is first discharged.

4. Nothing in these rules, except Chapter IX, applies to petroleum which has its flashing point not below 200° F.

CHAPTER II.

IMPORTATION OF PETROLEUM.

5. Save as provided in sections 8, 9, and 10 of the Act, dangerous petroleum shall not be imported except under a license granted under these rules.

License for import of dangerous petroleum.

6 Nothing in this Chapter applies to—

(a) dangerous petroleum not exceeding 6 gallons in quantity which is not intended for sale;

(b) dangerous petroleum contained in any fuel tank incorporated in a motor conveyance.

(2) Nothing in rules 5 and 7 shall apply to petroleum imported by the Jammu and Kashmir State Forces.

7. (1) Every person desiring to import petroleum shall furnish personally or through his agent to the Officer-In-charge of the Customs Post through which the import is to be made, a certificate of storage accommodation in Form 'A' signed by the said persons or his agent;

Importer to furnish certificate of storage accommodation,
 Provided that, where the importer intends to import both dangerous and non-dangerous petroleum, separate form shall be furnished for dangerous and non-dangerous petroleum.

Provided further that this sub-rule shall not apply where the quantity of non-dangerous petroleum to be imported by any one consignee does not exceed 500 gallons, or where the quantity of dangerous petroleum to be so imported does not exceed 60 gallons.

(2) Every person desiring to import dangerous petroleum shall produce, personally or through his agent before the Officer-In-charge of the Customs post of import, his license for the import and storage of such petroleum.

8. (1) No imported petroleum shall be unloaded except with the permission of the Officer-In-charge of the Customs post of import.

Unloading of petroleum,
 (2) If the Officer-In-charge of the Customs post after receiving—

(a) the Testing Officer's report on any petroleum.

(b) the certificate, required by sub-rule one of rule 7 and

(c) the license required by sub rule (2) of rule 7, and after making such further enquiries as he deems necessary, is satisfied that the petroleum can lawfully be imported and that there is suitable accommodation for it, he shall permit it to be un-loaded.

(3) Nothing in this rule shall affect the power of the officer-In-Charge of the Customs post to detain the petroleum under any other law or rule for the time being in force.

9 (1) Petroleum imported otherwise than in bulk shall be unloaded at the yards provided for the purpose.

Unloading of petroleum imported otherwise than in bulk.

(2) No petroleum contained in cask, drums or other receptacles shall be unloaded unless such receptacles are free from leakage and of such strength and construction as not to be liable to be broken or to leak except in case of gross carelessness or extraordinary accident.

Provided that petroleum contained in casks, drums or other receptacles which do not satisfy the requirements of this sub-rule may, subject to such conditions as the Officer-In-Charge of the Customs post may impose, be unloaded at a separate place approved for the purpose.

10. Nothing in rules 7 to 9 inclusive applies to heavy petroleum.

CHAPTER III

Transport of petroleum.

PART I GENERAL.

11. All due precautions shall be taken at all times to prevent accident by fire or explosion.

Prevention of
accidents,

12. All due precautions shall be taken at all times to prevent any escape of petroleum during transport especially into any drain, sewer, river or water course.

Prevention of escape of
petroleum.

13. All empty tanks or other receptacles which have contained dangerous petroleum or which have contained non-dangerous petroleum in bulk shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum vapour.

Empty receptacles.

14. (1) Dangerous petroleum, if not in bulk, shall be contained in gas-tight tinned, galvanized or otherwise externally rust proofed sheet iron or steel receptacles which shall be fitted with well-made fitting apertures and well-fitting screw plug, or with screw caps or other caps with metal airtight under-caps. The receptacles shall be kept in proper repair.^t

Receptacles for
dangerous petroleum.

(2) No receptacles, other than tanks or tank-carts of a type approved in writing by the Inspector General of Police shall be of more than 65 gallons capacity excluding the airspace prescribed by sub-rule (7)

(3) The receptacles other than tanks or tank carts, shall be of a type approved in writing by the Licensing Authority and shall have the following thickness of metal.

Not less than

Capacity exclusive of the prescribed
air-space not exceeding 2 gallons ... 27 B. G.
Exceeding 2 gallons but not exceeding

		4 gallons	... 22	„
„	4	30 „	... 18	„
„	30	45 „	... 17	„
„	45	„	... 16	„

(4) Where the approval of the Licensing Authority is sought to a type of receptacles not previously approved, three copies of a detailed drawing thereof to scale shall be forwarded to him.

(5) The receptacles shall be so constructed and secured as not to be liable, except under circumstances of gross negligence or extraordinary accident to become defective, leaky or insecure in transit.

(6) The receptacles shall bear a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Petrol" or "Motor" spirit or an equivalent warning of the dangerous nature of the petroleum.

(7) An air space of not less than $7\frac{1}{2}$ per cent. of its capacity shall be left in each tank, drum, or other receptacle containing dangerous petroleum.

(8) Nothing in sub-rules (1), (2), (3), (4) and (6) shall apply to receptacles in the possession of the Jammu and Kashmir State Forces.

15. Non-dangerous petroleum, if not in bulk, shall be packed in air-tight tins or drums of steel or iron or in other receptacles not easily broken or in tanks permanently fixed to cart-wagons, boats or other means of carriage, and of type approved by the Inspector General of Police.

16. (1) No person shall deliver any petroleum to any one in the State other than the holder of a storage licence or his authorized agent or railway administration.

Restriction on delivery
and despatch of petrol-
eum.

(2) No person shall despatch any petroleum to any one in the State other than the holder of a storage license.

(3) Notwithstanding anything contained in sub rule (2) non-dangerous petroleum not exceeding 3,000 gallons in quantity packed in sealed air-tight tins or drums of steel or iron may be despatched to a person not holding a storage license, provided that the person despatching the petroleum has satisfied himself that prior arrangements have been made by the person to whom the petroleum is despatched for the immediate disposal in the original packages of any quantity in excess of 500 gallons.

(4) This rule shall not apply to the delivery or despatch of petroleum in quantities which are permitted by the Act or these rules to be stored without license or to any petroleum in the possession of the Jammu and Kashmir State Forces

PART II.

TRANSPORT ON LAND BY VEHICLES.

17. (1) No fire or other artificial light capable of igniting inflammable vapour shall be allowed on any vehicle containing petroleum in bulk.

(2) No person shall smoke while on or attending such a vehicle.

(3) No article or substance capable of causing fire or explosion shall be carried on such a vehicle.

Explanation.—For the purposes of this rule any tank or other receptacle which has contained petroleum and which has not been thoroughly cleaned and freed from inflammable vapour shall be deemed to contain petroleum.

18. (1) Tank-wagons, lorries or carts transporting petroleum shall only be filled or discharged by means of metal pipes or armoured hose in which the armouring is electrically continuous throughout.

(2) Tanks, other than fuel tanks on vehicles, containing dangerous petroleum shall not be filled or discharged :—

(i) within 100 feet of any fire furnace or artificial light capable of igniting inflammable vapour, or

(ii) at any place where the lorry, wagon or cart is exposed to sparks ;

Provided that the distance specified in clause (i) may be

reduced to 30 feet when the petroleum is filled or discharged under seal and closed vapour return pipe lines are provided :

Provided further that the distance specified in clause (i) may be reduced to the figure prescribed in the license in Form K where the petroleum is filled, stored and discharged into a tank in any premises licensed in that Form.

Explanation —A pipe supplying liquid to a tank is "under seal" to that tank if it is screwed to the tank or otherwise attached so that no liquid or vapour can escape into the air except through an approved vent.

19. An adequate supply of sand or other efficient means of extinguishing fire shall be carried in an easily accessible position on every vehicle transporting petroleum in bulk by road.

20. Petroleum shall not be transported on any public vehicle which is carrying passengers.

21. (1) Every vehicle while engaged in the transport of petroleum by road shall be constantly attended by at least one person :

Provided that such vehicles may be left unattended in places previously approved by the Inspector General of Police.

(2) Every vehicle on which more than 1,000 gallon of petroleum is being transported by road, or which, while transporting any petroleum by road is being trailed by another vehicle, shall so long as it is in motion be attended by at least two persons.

22. (1) A trailer not exclusively used for transporting petroleum shall not be attached to any vehicle transporting petroleum by road.

(2) A trailer transporting petroleum shall not be attached to any vehicle other than a vehicle used for transporting petroleum and not more than one trailer shall be so attached.

(3) A trailer shall have two axles.

(4) When a trailer is attached to a vehicle, the total quantity of petroleum transported on the trailer and the vehicle combined shall not exceed 2,000 gallons.

(5) If a trailer transporting dangerous petroleum is attached to a vehicle transporting non-dangerous petroleum the vehicle shall comply with all the provisions of these rules relating to vehicles transporting dangerous petroleum.

(6) A trailer other than a tank trailer shall not be

attached to a tank wagon. The capacity of a tank trailer shall not exceed 500 gallons, and no trailer shall be attached to a tank-wagon of greater capacity than 1,500 gallons.

(7) No trailer attached to a tank-wagon shall be employed within any thickly populated area without the permission in writing of the District Authority.

23. In these rules the tank forming part of a tank wagon or tank trailer shall be deemed to include any number of tanks on the same chassis and any limitation herein prescribed on the capacity of a tank shall be construed so as to permit of the tank containing the amount specified under varying degrees of temperature.

24. If electric lighting is employed on any vehicle including a trailer, used in the transport of petroleum other than heavy petroleum by road, the following conditions shall be complied with:—

(i) the pressure shall not exceed sixteen volts ;
(ii) the circuit shall be heavily insulated and shall be independent of the chassis, and the wiring shall be so fixed and protected as to reduce as far as possible the risk of damage ;

(iii) the generator, battery, switches and fuses shall be carried in front of the fire-resisting screen and the battery shall be in an easily accessible position ; and

(iv) means of cutting off the current close to the battery by a double pole switch or other suitable method shall be provided.

25. (1) No motor conveyance other than aircraft shall fill or replenish its fuel tanks with petroleum other than heavy petroleum directly from vehicles carrying petroleum in bulk.

(2) Aircraft may receive fuel by means of specially constructed tank lorries or wagons only if these are of a type approved by the Inspector General of Police for this purpose.

(3) During the fuelling of aircraft used for the conveyance of passengers no passengers shall be allowed to remain in the machine.

(4) No person shall be allowed to smoke within 100 feet of any aircraft while it is being or is about to be-fuelled.

(5) All aircraft engines within the distance specified in sub-rule (4) shall be stopped so long as fuelling is in progress.

(6) Nothing in sub-rules (2) and (5) shall apply to military aircraft fuelling on military aerodromes.

Owner responsible for observance of rules.

26. The owner of a vehicle used for the transport of petroleum who employs any person in connection with such transport, shall be responsible that all necessary measures have been taken to ensure that such person is acquainted with and carries out the provisions of these rules.

27. During the filling, discharging or emptying of any tank wagon or trailer transporting petroleum in bulk other than heavy petroleum the following precautions shall be observed.

(i) if the vehicle is mechanically-driven the engine shall be stopped so long as the filling, discharging or emptying is in progress and shall not be restarted until all tanks and valves have been securely closed ;

Provided that this condition may be dispensed with in the case of vehicles approved under sub-rule (2) of rule 25 which are supplying aircraft,

(ii) Adequate provision shall be made to prevent the accumulation of a dangerous static charge of electricity.

(iii) if the wagon is drawn by an animal or animals they shall be removed from the wagon and the wheels securely scotched before the filling, discharging or emptying of any dangerous petroleum is begun, and

(iv) the vehicle shall be constantly attended by a competent person.

28. Petroleum in cans or other receptacles shall not be transported by road on any tank-wagon used for the transport of petroleum unless wagon is so constructed as to comply with the conditions applicable to transport on wagons other than tank wagons as well as with the conditions applicable to transport on tank wagons.

29. Except during the operations of filling or emptying a tank wagon the filling and dipping pipes shall be kept securely closed. Where the filling pipes are not provided with a liquid seal, the covers shall be kept locked or properly sealed except during the operation of filling a tank-wagon, and the keys shall not be carried on the wagon.

30. Except where approved electric lighting as specified in rule 59 is exclusively used, the filling, discharging and emptying of tank-wagons shall be performed between the hours of sunrise and sunset.

31. (1) petroleum in bulk shall not be transported by land except in a vehicle of a type approved in writing by the Inspector General of police.

(2) All such vehicles other than those exclusively used for the transport of heavy petroleum shall have a stamped embossed, painted or printed warning exhibiting in conspicuous characters the words "Petrol", "Motor Spirit" Kerosene or an equivalent warning of the nature of the contents.

(3) Every such vehicle and its fittings shall be maintained in good condition.

32. (1) Every vehicle on which petroleum not in bulk is transported shall be strongly constructed and with sides and back of adequate height and shall be maintained in good condition.

(2) In the case of animal-drawn vehicle the requirement in sub-rule (1) regarding the sides and back of the vehicle shall not apply if the load is securely fastened to the vehicle.

(3) All receptacles shall be so packed as not to project beyond the sides or back of the vehicle.

33 (1) In every mechanically driven vehicle used for the transport by road of petroleum other than non-dangerous petroleum not in bulk or heavy petroleum.

(a) the engine shall be of an internal combustion type ;
 (b) the engine fuel tank and electric batteries shall be effectively screened from the body of the vehicle by a fire-resisting shield carried up above the height of the load and down to within twelve inches of the ground.

(c) the exhaust shall be wholly in front of the fire-resisting shield.

(2) If windows are provided in the fire-resisting shield they shall be fitted with wired glass.

(3) The fuel tank of every such vehicle other than an articulated vehicle may be behind the fire-resisting shield if :

(a) a fuel feed apparatus, placed in front of the shield, is used to lift the contents from the fuel tank, and

(b) the fuel tank is protected from blows by the frame or by stout steel guards, and the filling hole cover is provided with a lock.

(4) The fuel tank of any vehicle may be behind the fire-resisting shield if the fuel used in the engine is heavy petroleum.

(5) A quick action cut-off valve shall be fitted to the fuel feed pipe of every such vehicle in an easily accessible position, which shall be clearly marked.

34. Without prejudice to the operation of any other provision of law for the time being in force whereby a lower limit of speed is imposed, the speed of a motor tank wagon, or a

Speed limit for vehicles.

motor lorry transporting petroleum in receptacles shall not exceed 30 miles per hour if fitted with pneumatic tyres and 15 miles per hour if fitted with solid tyres.

35. (1) If the Inspector General of police is satisfied that in respect of any class of vehicle any of the requirements of rules 22, 32 and 33 may be safely suspended or relaxed he may authorise such suspension or relaxation for such period and under such conditions as he may think fit.

Exemptions.

(2) Nothing in rules 22, 24, 31, 32 and 33 shall apply to vehicles and trailers in the possession of the Jammu and Kashmir State forces.

36. (1) Rules 17 to 34 shall not apply to the conveyances of petroleum in any motor vehicle for use only in the propulsion of such vehicles.

Special provisions for motor conveyances.

(2) No motor conveyance carrying passengers on hire shall carry any petroleum other than :—

(i) petroleum in the fuel tank incorporated in the conveyance and.

(ii) petroleum not exceeding 20 gallons in quantity intended to be used to generate motive power for the conveyance and kept in the manner provided in sub-section (2) of section 8 of the Act.

(3) During the filling or replenishment of the fuel tank of a vehicle licensed for the conveyance of more than six passengers on hire, the driver or other person in charge of the vehicle shall not allow any passenger to remain in the vehicle.

(4) All petroleum tins carried in a vehicle carrying passengers for hire shall be securely closed and shall be carried in a specially prepared receptacle which is not accessible to passengers in the vehicle, and is not on the roof.

PART III.

TRANSPORT BY PIPE LINES.

37. The rules in this part apply only to the transport of petroleum by means of pipe lines other than those in any area in which operations for the winning of natural petroleum or natural gas or both are carried on or within the limits of refineries and installations.

Application.

38. An approved casing shall be put over the pipe line where it passes under any railway or public road and an approved protective casing shall be constructed round the pipe where it crosses over any railway or protected work.

Casings.

Provided that the Inspector General of Customs and Excise, may waive this rule in the case of any specified road or roads, if he is satisfied that the safety of the public is not likely to be endangered thereby.

(2) The Inspector General of Customs and Excise may require an extra casing to be put over the pipe line where it crosses any stream, road, railway or protected work.

39. The whole of every pipe line shall be efficiently patrolled.

Patrol.

40. As a precaution against excessive pressure in the pipe line an automatic by-pass relief valve and a reliable pressure gauge shall be placed on the common discharge pipe at pumping stations.

Precaution of excessive pressure.

41. A telephone or telegraph line shall be provided with connections at frequent intervals along the pipe line. One telephone or telegraph line shall suffice for a series of parallel pipe lines ;

Telegraph and telephons.

Provided that this rule shall not apply to a pipe line connecting railway sidings with installations if the length of such pipe line does not exceed one mile.

42. Gate valves shall be provided at reasonable intervals.

Gate valves.

43. Tank gauges shall be checked between stations at frequent intervals.

Checking of Tank gauges.

CHAPTER IV.

STORAGE OF PETROLEUM REQUIRING LICENSE.

44. Save as provided in section 7, 8 and 9 of the Act and by rule 63 no one shall store any petroleum except under a license granted under these rules ; Provided that no license shall be necessary for storage in a well-head tank.

License for storage.

45. (1) No person shall smoke in any installation or storage shed.
 fire Precautions against

(2) No person shall carry matches, fuses or other appliance for producing ignition or explosion in any installation or storage shed which is used for the storage of dangerous petroleum.

(3) No fire, furnace or other source of heat or light capable of igniting inflammable vapour shall be allowed in any licensed installation or storage shed save in places specially authorised by the Licensing Authority for the purpose.

(4) An adequate supply of dry sand or earth together with the necessary implements for its convenient application, or other efficient means of extinguishing petroleum fires, shall always be kept in every installation and in or adjacent to every storage shed.

46. All operations within an installation or storage shed shall be conducted under the supervision of an experienced responsible agent or supervisor.
 Supervision of operations within an installation in storage shed.

47. The ground in the interior of an installation, and the protected area surrounding any storage shed or installation, shall be kept clean and free from all inflammable material waste vegetation and rubbish.
 Cleanliness of installation and storage shed.

EXPLANATION.—In this rule “protected area” means the area necessary for the maintenance of the distances required under the conditions of the license to be kept clear between any installation or storage shed and any protected work.

48. (1) All enclosures surrounding tanks or buildings belonging to an installation or storage shed shall be kept drained and no water shall be allowed to accumulate in the enclosure.
 Drainage.

(2) Where drainage is effected by means of a pipe the pipe shall be fitted with a valve actuated from the outside of the enclosure.

Provided that this sub-rule shall not apply to storage sheds which are not required under these rules or the terms of the license to be provided with an enclosure wall or embankment.

(3) All valves and other openings for draining off water shall be kept closed except when water is being drained off.

(4) The nature of the drainage arrangements shall be shown in the plan submitted with the application for a licence.

49. (1) Every installation shall be surrounded by a wall
Exclusion of unauthori- or fence of at least six feet in height.
sed persons.

Provided that nothing in this sub-rule shall apply to an installation licensed under the rules in force immediately before these rules come into operation unless its fencing is considered by the Licensing Authority to be unsatisfactory.

(2) Precautions shall be taken to prevent un-authorised persons from having access to any storage shed or installation.

50. No person under the age of 15 years shall be employed in or allowed to enter any premises
Children. licensed under these rules.

51. The provisions of rules 13, 14 and 15 shall apply to
Receptacles for pet- petroleum stored under license.
roleum.

52. No installation or storage shed shall without per-
Petroleum only to be mission in writing from the Inspector
stored. General of Customs and Excise be used
for any purpose other than the storage and distribution of
petroleum and purposes directly connected therewith.

53. The capacity in gallons of every tank in an installa-
Marking of capacity tion shall be conspicuously marked on the
of tanks. tank.

54. (1) Every tank or other receptacle used for the
Construction of tanks. storage of petroleum in bulk other than
well-head tank shall be constructed of
iron or steel properly erected and designed according to sound
engineering practice, and, together with all pipes and fittings,
shall be so constructed and maintained as to prevent any
leakage of petroleum.

(2) The height of a storage tank shall not exceed its dia-
meters.

Provided that, in the case of tanks of less than 30,000
gallons capacity, the height may extend to one and half times
the diameter.

(3) No tank shall be more than 50 feet in height.

55. (1) Storage tanks or other receptacles for the storage
Testing of Tanks. of petroleum in bulk other than well-head
tanks, after being placed in a final position
and before being brought into use, shall, unless they were in
use before the publication of these rules, be tested by water
pressure by the licensee in the presence of an Engineer
accepted as qualified for the purpose by the Licensing Authority.

(2) The water used for testing shall be free from
petroleum and shall not be passed through any pipes or pumps

ordinarily used for the conveyance of petroleum.

Provided that, where the Licensing Authority is satisfied that it is not reasonably possible to convey water by pipes or pumps other than these ordinarily used for the conveyance of petroleum, he may permit the use of a petroleum-pipe or pump for the conveyance of water subject to such conditions as he may impose.

(3) The test referred to in sub-rule (i) shall also be made before any receptacles for the storage of petroleum in bulk are brought into use after being repaired.

56. All tanks or other receptacles for the storage of petroleum in bulk, other than well-head tanks or tanks or receptacles of less than 10,000 gallons capacity containing heavy petroleum shall be electrically connected with the earth in an efficient manner by means of not less than two separate and distinct connections placed at opposite extremities of such tank or receptacle. The roof and all metal connections of such tank or receptacle shall be in efficient electrical contact with the body of such tank or receptacle.

57. The connections and contacts required by rule 56 shall be inspected and tested at least once in every year by the licensee of the tank or receptacle in the manner prescribed by the Licensing Authority.

(2) A record of such inspections and tests shall be maintained by such licensee, and shall be produced on demand by any Inspector.

58. No installation or storage shed shall be open, and no work in any installation or storage shed shall be permitted, between sunset and sunrise except where approved electric lighting as specified in rule 59 is exclusively used.

59. (i) All electric wires installed at less than 15 feet from the ground in any petroleum installation or situated within 20 feet of any building or tank containing dangerous petroleum shall consist of insulated cables, enclosed in metallic coverings which shall be gas tight electrically and mechanically continuous throughout and effectively earthed outside the building.

(2) No electric wire shall pass over any petroleum tank, filling, painting or storage shed.

(3) In filling, painting and storage sheds and pump rooms used for

(i) dangerous petroleum:—

- (a) all electric meters, distribution boards, switches, fuses, plugs and sockets shall be placed outside the building and shall be of flam-proof construction satisfying the requirements of the British Standard Specification No. 229 and the frames shall be effectively earthed ;
- (b) all electric fixed lamps shall be enclosed in a well glass flame-proof fitting, either doubly enclosed with an inner and an outer well glass or singly enclosed with substantial metal protection, such lamps shall be installed at 12 feet where possible, but in no case less than 8 feet, above the floor level ;
- (c) all electric portable hand lamps of the self-contained pattern shall be of a type approved by the Licensing Authority.
- (d) for the examination of cans and other containers, electric torches employing a separate battery may be used, these torches shall be fitted with substantially protected flame-proof globes and shall be supplied through a cable of cab-tyre or other suitable sheathing and properly constructed flame-proof connectors, and
- (e) no single fixed lamp shall exceed 150 watts.

(ii) non-dangerous petroleum ;

- (a) all electric meters, distribution boards switches, fuses, plugs, and sockets shall be enclosed in ironclad, gas-tight cases and shall be fixed at least 5 feet above the floor level in well-ventilated positions close to the door.
- (b) all electric fixed lamps shall be enclosed in a gas-tight well glass fitting provided with substantial metal protection ;
- (c) all electric portable hand lamps shall be fitted with substantially protected gas-tight globes and supplied through a flexible cab-tyre or other suitable sheathing and properly constructed gas-tight connectors, and
- (d) no single fixed lamp shall exceed 200 watts and no hand lamp shall exceed 30 watts.

60. No internal combustion engine or electric motor shall be used for driving pumps for pumping petroleum have in a pump house specially

Pumping.

constructed for the purpose and under such conditions as may be approved by the Licensing Authority ;

Provided that this rule shall not apply where the motor control switchgear and starting apparatus are of flame-proof construction satisfying the requirements of the British Standard specification No. 229.

61. Copies of the preceding rules in this Chapter and of the conditions of the license shall be exhibited in a conspicuous place in every licensed installation and storage shed.

62. Nothing in rules 44, 49, 52, 55 and 58 shall apply to petroleum in the possession of the Jammu and Kashmir State Forces.

CHAPTER V.

STORAGE OF PETROLEUM NOT REQUIRING LICENSE.

63. (1) Notwithstanding anything contained in these rules, it shall be permissible to store, without license, subject to the conditions of this Chapter, heavy petroleum in quantities not exceeding 10,000 gallons, which is not stored in the same installation or storage shed as other petroleum.

(2) The provisions of Chapter IV shall not apply to petroleum so permitted to be stored without license under sub-rule (1).

64. (1) Heavy petroleum in bulk, if stored otherwise than under a license, shall be stored in a tank constructed of iron or steel properly erected and designed and the tank with all pipes and fittings shall be so constructed and maintained as to prevent any leakage of petroleum.

(2) All tanks of a capacity exceeding 1,000 gallons shall be surrounded by a bank or wall, or sunk in a pit, so constructed and maintained as to be able to contain without leakage the whole of the petroleum liable to be present at any one time in the tank.

(3) A distance of not less than ten feet shall be kept clear between protected works and the enclosures walls or banks.

(4) Nothing in this rule shall apply to petroleum in the possession of the Jammu and Kashmir State Forces.

65. Heavy petroleum which is not in bulk, if stored otherwise than under a license, shall if the quantity exceeds 500 gallons, be stored in

storage shed of which either—

(a) the doorways and other openings shall be built up to a height of one foot above the level of the floor, or

(b) the floor shall be sunk to a depth of one foot.

66. Every person intending to store heavy petroleum in quantity exceeding 1,000 gallons otherwise than under a licence shall send to the Inspector General of Customs and Excise a prior report stating the situation of the premises on which such petroleum is to be stored.

Prior report of storage of exempted heavy petroleum.

67. (1) Every garage or hangar used for housing any motor conveyance containing dangerous petroleum in bulk in any tank incorporated in the conveyance, whether such petroleum is intended to be used to generate motive power for the conveyance or not, shall be constructed of inflammable material and be effectively and safely ventilated to the open air.

(2) Every such garage or hangar shall be in charge of a competent person who shall be responsible for taking all proper precautions against fire and shall prevent unauthorised persons from having access to the building.

CHAPTER VI.

LICENCES.

68. (1) A person wishing to obtain or to renew a licence prescribed under these rules shall submit an application in writing to the authority empowered to grant such a licence.

Application for licence.

(2) Every application for the grant or renewal of a license to store or to import and store petroleum shall be in Form B.

69. (1) Licences for importation and storage may be granted by the Inspector General of Customs and Excise in the forms for the purposes and on payment of the fees specified in Schedule I,

Grant of licence

(2) A license in Form H may be granted for such period as the Licensing Authority may deem necessary subject to a maximum of 12 months. Every other licence granted or renewed under the rules shall remain in force until the last day of Chet of the year for which the license is granted or renewed.

(3) an applicant for a new licence may apply to the District Authority for a certificate to the effect that there is no objection to the applicant receiving a licence for the site proposed and the District Authority shall, if he sees no objection, grant such certificate to the applicant who may forward it to the

Licensing Authority with his application in Form B.

(4) The Licensing Authority may refer an application not accompanied by a certificate granted under sub-rule (3) to the District Authority for the observations.

(5) If the District Authority, either on a reference being made to him or otherwise, intimates to the Licensing Authority that any license which has been applied for should not in his opinion, be granted, such licence shall not be issued without the sanction of the Government.

(6) No licence in Form H shall be granted except to a person holding a license in Form I.

(7) In the case of a licence granted for storage one copy of the plan or plans of the storage premises signed in token of approval by the Licensing Authority shall be attached to the licence and one copy shall be filed for record in the office of the Licensing Authority.

70. Every licence granted under these rules shall be held subject to the conditions endorsed on it and shall contain all the particulars which are contained in the form prescribed for it by these rules

71. Notwithstanding anything contained in rule 70 the Licensing Authority, at the time of issuing a license may omit, alter or add to any of the conditions specified in the prescribed form of license.

Power of licensing authority to alter conditions

72. (1) Any license granted under these rules may be amended by the authority granting such a licence ;

amendment of licence

Provided that the amendments shall not be inconsistent with any rule in this Chapter.

(2) A licensee who desires to have his license amended shall submit it to the Licensing Authority with an application stating the nature of the amendment and the reasons there for.

(3) The fee for the amendment of a license shall be one rupee plus the amount (if any) by which the fee that would have been payable if the license had originally been issued in the amended form exceeds the fee originally paid for the license,

73. (1) A license may be renewed by the authority empowered to grant such a license.

Renewal of license

(2) Every application for the renewal of a licence shall be made not less than thirty days before the date on which the license expires, and if the application is so made, the premises shall be held to be duly licensed until such

date as the Licensing Authority renews the license or until an intimation that the renewal of the license is refused has been communicated to the applicant.

(3) The same fee shall be charged for the renewal of a license as for a license.

74. (1) The Licensing Authority refusing to grant, amend or renew a license, shall record his reasons for such refusal in writing.

Refusal of license

(2) A copy of the order containing the reasons for such refusal shall be given to the applicant on payment of a fee of one rupee.

75. (1) Every license granted under these rules shall be liable to be cancelled by order of the Licensing Authority for any contravention of the Act or of any rule thereunder, or of any condition contained in such license,

Cancellation of license

(2) The Licensing Authority cancelling a license shall record his reasons for so doing in writing.

(3) A copy of the order containing the reasons for the cancellation of a license shall be given to the holder of the license on payment of a fee of one rupee.

76. (1) Any person may appeal to the Government from an order of the Licensing Authority refusing to grant, amend or renew a license or cancelling a license.

Appeal.

(2) Every appeal shall be in writing and shall be accompanied by a copy of the order against which the appeal is made.

(3) The appeal shall be presented within 60 days when the order appealed against has been passed by the Licensing Authority.

77. With every license granted for the storage of petroleum a copy of rules 44 to 61 in Chapter IV shall be given free of charge to the licensee.

Supply of rules.

78. (i) Before petroleum is stored in any installation for which a license is being granted for the first time, a certificate shall be furnished to the Licensing Authority to the effect that all enclosure walls and embankments constructed in accordance with the conditions of the license are of such a nature as to ensure safety.

Certificate of safety.

(ii) The certificate shall be signed by an Engineer, accepted as qualified for the purpose by the Licensing Authority.

(iii) When the license is not granted for the first time, but is being granted for an increased quantity of petroleum, a certificate shall similarly be furnished to the Licensing Authority before any quantity of petroleum exceeding the amount which was admissible under the former license is stored in the installation.

79. (1) The holder of a license for the storage of petroleum may, at any time before the expiry of the license, apply for permission to transfer his license to another person.

(2) Such application shall be made to the Licensing Authority who shall, if he approves, of the transfer enter upon the license, under his signature, an endorsement to the effect that the license has been transferred to the person named.

(3) A fee of one rupee shall be charged on each such application.

(4) The person to whom the license is so transferred shall enjoy the same powers and be subject to the same obligations under the license as the original holder.

80 (1) If a licensee dies or becomes insolvent or mentally incapable or otherwise disabled, the person carrying on the business of such licensee shall not be liable to any penalty or confiscation under the Act or these rules for exercising the powers granted to the licensee by the license during such time as may reasonably be required to allow him to make an application for a new license in his own name for the unexpired portion of the original license.

(2) A fee of one rupee shall be charged for a new license for the unexpired portion of an original license granted to any person applying for it under this rule.

81. Where a license granted under these rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of one rupee.

82. (1) Every application for the grant or renewal of a license shall be accompanied by the fee payable thereon. If the license is not granted or renewed, the fee shall be refunded.

83. The Government may, by general or special order grant exemption from, or reduction of any fee payable under these rules.

84. (1) Every person holding or acting under a license granted under these rules shall produce it, or an authenticated copy of it, at the place to which the license applies, when called upon to do so by any Inspector.

(2) Copies of any license may, for the purposes of this rule, be authenticated free of charge by the authority which granted the license.

85. The District Authority shall inform the Licensing Authority of the action taken by him on any report of infringements of the Act or of these rules which the Licensing Authority may make to him.

CHAPTER VII.

TETRA ETHYL LEAD MIXTURE.

86. Tetra ethyl lead shall not be added to petroleum in such quantity as to render the proportion of tetra ethyl lead to petroleum in excess of one part in 1,000 parts by volume or one part in 450 parts of weight.

87. No person shall import, transport or store any petroleum containing tetra ethyl lead in which the proportion of tetra ethyl lead exceeds one part in 1,000 parts by volume or one part in 450 parts by weight.

88. The Licensing Authority may by an order in writing in special cases permit the proportion of Tetra ethyl lead prescribed in rules 86 and 87 to be increased.

89. Every mixture of petroleum tetra ethyl lead shall be distinctively coloured before being sold to the public.

90. All receptacles containing a mixture of petroleum and tetra ethyl lead shall unless they are in the possession of Jammu and Kashmir State Forces bear a warning in the following terms.

“Warning
This spirit contains lead and should be used as a motor fuel only”.

CHAPTER VIII.

TESTING OF PETROLEUM.

91. (1) In all cases the Sampling Officer shall personally superintend the drawing of the sample. Where the sample is drawn from an original unopened receptacle containing petroleum not in bulk the opening shall be sufficient to admit of the sample being rapidly transferred from the receptacle.

Drawing of samples.

(2) Two bottles, each of the capacity of about 40 fluid ounces, shall be filled to three-quarters of their capacity with the sample and corked. The cork shall be driven home and cut off level with the neck and melted sealing wax shall be worked into the cork and the bottles shall be efficiently sealed.

92. One of the bottles referred to in sub-rule (2) of rule 91 shall be preserved for reference in case of need and the other shall be forwarded to the testing officer.

Forwarding and retention of bottles,

93. (1) When the licensee or his agent has on import of a consignment of petroleum sought permission to unload the same under rules 7 and 8, the Sampling Officer shall obtain samples of all the petroleum which it is intended to unload at the depot ;

Procedure of delivery of samples.

Provided that no sample need be taken of
 (a) petroleum which is declared to be dangerous, or
 (b) petroleum which is covered by a certificate on the prescribed form granted by a Testing Officer appointed by the Government of India, under the Indian Petroleum Rules 1937.

(2) The licensee shall deliver to the Sampling Officer without charge, samples of every variety of petroleum comprised in the petroleum of which samples are to be taken under sub-rule (1) such samples shall, if the Sampling Officer so requires, be taken from the particular receptacles indicated by him ;

Provided that when the petroleum is in cases, sample may be taken as unloading proceeds.

94. The minimum number of samples to be selected of each brand or quality contained in the consignment shall be as follows :

Selection of samples from a consignment.

(i) in cases-one sample for every 10,000 cases or part thereof :

(ii) in casks or drums, declared to be of uniform quality-one sample for every 80,000 gallons or part thereof.

(iii) in bulk or in tanks-one sample for each tank or tank compartment.

95. (1) The Standard Test Apparatus and thermometers shall—

Standard Test Apparatus

(a) agree in every respect with the specifications laid down in Schedule III, and

(b) have been tested and certified by the Board of Trade or the National Physical Laboratory London and marked with the year of test.

(2) The standard thermometers shall be replaced at least once in every three years.

96. When any apparatus for determining the flashing point of petroleum is submitted to the officer appointed under sub-section (1) of section 15 of the Act for comparison with the Standard Test Apparatus, that officer shall examine the apparatus including the thermometers and the barometers or aneroids.

(2) No certificate shall be granted under section 16 of the Act if :—

(a) the apparatus is in any respect outside the tolerances laid down in Schedule III to these rules or is otherwise defective, or

(b) any thermometer shows readings varying by more than 1 F. at temperature of 76° F. and 125° F. as given by the Standard Test Apparatus : or

(c) any barometer or aneroid shows a variation of more than half an inch from the pressure given by the Standard Test apparatus.

(3) A certificate in Form C shall be granted in respect of any apparatus which has been found to agree with the Standard Test Apparatus within the limits mentioned in sub-rule (2).

(4) A certificate granted under this rule shall be valid for a period of three years.

97. A register of all certificates granted under rules 96 shall be maintained in Form D by the officer appointed under sub-section (1) of section (15) of the Act

Register of certificates,

98. (i) The Testing Officer shall test the samples in the manner laid down in Schedule III to these rules.

Methods of test,

(2) In all cases at least three samples shall be separately tested, the average of the three readings being corrected for the thermometer correction if any, and for the barometric correction in case of dispute.

(3) If the average flashing-point is not lower than 76° F and no one test gives a flashing-point below 75° F the whole of the petroleum represented by the samples shall be deemed to be non-dangerous petroleum.

99. (1) If the Testing Officer, after testing samples taken from a consignment, considers further tests necessary to satisfy himself that none of the petroleum is dangerous, he shall report to the Officer-In-charge of the Customs Post of import accordingly.

Procedure when test
show want of unifor-
mity.

(2) On receipt of a report under sub-rule (1).

(a) when the the consignment is imported in cases, casks, or drums, the Office-In-charge of the Customs Posts shall cause the petroleum in question to be unloaded and stocked in lots of not more than 1500 cases or casks or drums each and the Sampling officer shall select and deliver to the Testing Officer one sample from each lot.

(b) when the consignment is imported in bulk, the Sampling Officer shall forward a second sample and the Officer-In-charge of the Customs Post may, until the receipt of the Testing Officer's further report, prevent the unloading of any portion of the contents of the tank in question or may permit it to be unloaded in anticipation of the Testing Officer's report if the consignee furnishes a guarantee to rebook the petroleum if the Testing Officer's report proves unfavourable.

100. (1) The Testing Officer shall as soon as practicable and ordinarily within twenty four hours after receipt of any sample make out a certificate in Form E and shall forward it to the officer submitting the sample.

Certificate of tests.

(2) The Testing Officer shall, at the request of any person concerned, furnish him with a certified copy of the certificate in Form E issued under sub-rule (1) on payment of a fee of one rupee.

101. (1) The fee for each inspection of the Standard Test Apparatus shall be one rupee.

Fee for inspection and
comparison.

(2) The fees for comparing a privately owned Test Apparatus with the Standard Test Apparatus shall be as

follows :—

	Rs.
Abel Flash Point Apparatus or Pensky Martens Apparatus	30
Baron ter Point Apparatus or Pensky-Martens Apparatus	10
Thermometer Point Apparatus or Pensky-Mortens Apparatus... ..	10
102. The fee for testing each sample of imported petroleum shall be five rupees.	

Fee for testing.

Provided that the aggregate fee chargeable under this sub rule shall not, in the case of any one clip exceed Rs. 50.

(2) The fee for retesting each sample under section 20 of the Act shall be five rupees. It shall be refunded if the original test is proved to be erroneous.

SCHEDULE I.

Licenses (Vide Rule 69).

Article No.	Form of license.	Purpose for which granted.	Fee.
1	F.	To import dangerous petroleum other than petroleum which can be used in an internal combustion engine, in quantity not exceeding 60 gallons at any one time.	Re. 1.
2	G.	To store dangerous petroleum in quantity not exceeding 60 gallons.	Rs. 4.
3	H.	To store non-dangerous petroleum otherwise than in bulk, in quantity not exceeding 5,000 gallons.	(a) When the quantity to be stored does not exceed five hundred gallons Rs. 8.
	I.	To store petroleum in a tank or tanks in connection with a pump outfit for fuelling motor conveyances.	(b) When the quantity to be stored exceeds five hundred but does not exceed one thousand gallons Rs. 12.
		(c) When the quantity to be stored exceeds one thousand but does not exceed five thousand gallons.	Rs. 12 for the first one thousand gallons plus Rs. 3 for every additional one thousand gallon or part thereof.

Article No.	Form of license.	Purpose for which granted.	Fee.
		(d) When the quantity to be stored exceeds five thousand but does not exceed 50,000 gallons.	Rs. 24 for the first five thousand gallons plus Rs. 5 for every additional 1,000 gallons or part thereof.
5	J.	To import dangerous petroleum and to store petroleum in installations.	(e) When the quantity to be stored exceeds fifty thousand gallons Rs. 25.
6	K.	To import and store dangerous petroleum otherwise than in bulk and to store otherwise than in bulk (a) non-dangerous petroleum in quantity exceeding 5,000 gallons of (b) partly dangerous petroleum and partly non-dangerous petroleum.	(f) When the quantity to be stored or imported and stored does not exceed five hundred gallons Rs. 8.
7	Special forms.	To import dangerous petroleum and to store petroleum (in cases not provided for in article 1, 2, 3, 4, 5 and 6).	(g) When the quantity to be stored or imported and stored exceeds five hundred gallons. The same fees as those laid down for storage of non-dangerous petroleum.

SCHEDULE II.

*Form A (See Rule VII).***Certificate of storage accommodation.**

I hereby declare that I propose to store the following consignments of dangerous/non-dangerous petroleum arriving by Rail/Road on or about the _____ 19 . at the storage tanks or sheds of which particulars are given in capacity 1 and 2 of the statement below and I certify that the quantity shown as available in column 3 of that statement is available for the storage of the said petroleum, and that the said storage tanks and sheds are duly licensed for the storage of the petroleum in question.

*Importer or Agent.**Dated the* _____ *19* .**STATEMENT.**

1	2	3	4
Storage tanks or sheds.	Total capacity of each storage tank or shed.	Capacity available in each storage tank or shed	Capacity to be utilised by present consignment in each storage tank or shed.

Gallons ... Gallons ... Gallons.

Total Gallons ...

From B. (See Rule 68).

Application for the grant/renewal of a license to store or to import and store petroleum.

- | | | | |
|----|---|------------------------------|--|
| 1. | Applicant's Name | ... | The replies to be written
in this column. |
| | „ Calling | ... | |
| | „ Address | ... | |
| 2. | Situation of the premises where
petroleum is to be stored :— | | |
| | Province | ... | |
| | District | ... | |
| | Town or village | ... | |
| 3. | Petroleum proposed to be
stored— | | |
| | Nature (<i>i. e.</i> , dangerous,
non-dangerous or
heavy petroleum). | | |
| | Quantity | { In bulk ...
Not in bulk | |
| 4. | Form in which license is
required. | | |
| 5. | Do the premises fulfil all the
conditions endorsed on the
form ? | | |
| 6. | Petroleum already stored on
the premises— | | |
| | Nature | ... | |
| | Quantity | { In bulk ...
Not in bulk | |
| 7. | Dangerous petroleum proposed
to be imported— | | |
| | Quantity | { In bulk ...
Not in bulk | |
| | Remarks | ... | |

Signature of applicant.
 Postal address of applicant.
 Date of application.

NOTE.—This application if it relates to a new installation or storage shed or if the applicant proposes any alterations in an existing installation or storage shed, must be accompanied by specifications and plans drawn to scale in duplicate. The plans should clearly indicate :—

- (a) the manner in which the conditions prescribed by these rules have been complied with.
- (b) the premises to be licensed, the area of which shall be distinctively coloured or otherwise defined,
- (c) the surroundings and all protected works.
- (d) the position and capacity of all storage tanks, storage and filling sheds and the position of all other buildings and erections forming part of the installation,
- (e) the areas reserved for dangerous petroleum, heavy petroleum and non-dangerous petroleum other than heavy petroleum,
- (f) tanks and other enclosures,
- (g) all pumps, valves, filling and discharge points, vent pipes etc.

FORM C.

(See Rule 96).

Certificate of Apparatus.

_____ Apparatus.

Marked No. _____

Maker's Name _____

Slide No. _____

Thermometer No. _____ Oil Cup.

No. _____ Water Bath.

Cup No. _____

The above apparatus including the thermometers having been submitted for verification with the Standard Test Apparatus was compared by me on _____ and found to agree with it within the prescribed limits.

The following corrections are necessary to the thermometer and barometer or aneroid readings :—

Thermometer No. _____

No. _____

Barometer or Aneroid No. _____

Date _____

Reference _____

SIGNATURE AND DESIGNATION OF THE OFFICER,

appointed under Section 15 (1) of the Petroleum Act, 1998.

FORM D.

(See Rule 97).

Register of certificates of apparatus.

Serial No.	Place at which the apparatus is intended to be used.	Number and date engraved on the apparatus.	Contents of certificate.	Date on which certificate will cease to be valid.

FORM E.

(See Rule 100).

Certificate of tests of petroleum.

Owner _____

Marks _____

Test (1) _____

(2) _____

(3) _____

Average _____ Thermometer

Correction _____

The sample is _____

Petroleum and (in the case of non-dangerous petroleum)
has a flashing point of _____

Place _____

Date _____

Testing Officer.

FORM F.

(Article 1 of Schedule 1).

License to import dangerous petroleum other than petroleum which can be used in an internal combustion engine, in quantity not exceeding 60 gallons at any one time.

No.....

Fee Re. 1.

License is hereby granted to.....to import dangerous petroleum other than petroleum which can be used in an internal combustion engine, not exceeding sixty gallons in quantity at any one time, at.....subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall remain in force tiil the..... 19 .

The.....19 .

*Licensing Authority.***CONDITIONS OF LICENSE.**

1. Dangerous petroleum shall be imported in gas-tight tinned, galvanised or otherwise externally rust-proofed sheet iron or steel receptacles which shall be fitted with well-made filling apertures and well-fitting screw plugs or with screw caps or other caps with metal air-tight under-caps.

2. The receptacles shall have the following thickness of metal:—

Not less than.

Capacity exclusive of the prescribed
air-space.

Not exceeding 2 gallons	... 27 B. G.
exceeding 2 but not exceeding 4 gallons	22 B. G.
exceeding 4 but not exceeding 30 „	18 B. G.
exceeding 30 but not exceeding 45 „	17 B. G.
exceeding 45 gallons.	16 B. G.

3. The receptacles shall be so constructed and secured as

not to be liable except under circumstances of gross negligence or extraordinary accident, to become defective, leaky or insecure in transit and shall bear a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Highly inflammable" or an equivalent warning of the dangerous nature of the petroleum.

4. An air-space of not less than $7\frac{1}{2}$ per cent of its capacity shall be left in each receptacle at the time of filling.

(ii) in a properly ventilated iron bin of a design approved by the Licensing Authority placed on private ground in the open air.

2. The storage shed shall be adequately ventilated near the ground level and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze mesh not less than 28 to the linear inch.

3. The storage shed shall not form part of, or be attached to any building in which any person resides or works or where persons assemble for any purpose unless it is separated therefrom by a substantial floor or partition which is constructed of unflammable material and has no openings therein.

4. The storage shed, if in any building, shall not be situated under any staircase or under any other means of exit likely to be required to be used for escape in case of fire.

5. Any two storage sheds or bins or other storage premises not more than twenty feet apart, shall be deemed to be one storage shed.

6. No alterations shall be carried out in the storage shed or bin without the previous sanction in writing of Licensing Authority.

7. If the Licensing Authority calls upon the holder of a license, by a notice in writing, to execute any repairs to the storage shed which are in the opinion of such authority, necessary for the safety of the shed, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

8. Dangerous petroleum other than paints, varnishes, lacquers and similar products shall not be kept in any receptacle other than the standard petrol tins of capacity not exceeding two gallons exclusive of the prescribed air-space.

9. All empty receptacles which have contained dangerous petroleum shall except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum vapour.

10. No receptacles shall be repaired on the premises and no person shall repair or cause to be repaired any receptacle in which, to his knowledge, any dangerous petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle has been rendered free from dangerous petroleum and any inflammable vapour.

11. Adequate precautions shall be taken at all time for

the prevention of accident by fire or explosion.

12. Every care shall be taken to prevent any dangerous petroleum escaping into any drain, sewer, harbour, river or watercourse.

13. Adequate precautions shall be taken to prevent unauthorised persons having access to any dangerous petroleum kept and to the vessel which contains or has contained petroleum.

14. Any accident, fire, or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property, shall be reported to the nearest Magistrate or to the Officer In-charge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

15. Free access to the licensed premises shall be given at all reasonable time to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

FORM H.

(Article 3 of Schedule I).

License to store non-dangerous petroleum, otherwise than in bulk, in quantity not exceeding 5,000 gallons.

No.....

Fee Rs.

License is hereby granted to..... valid only for the storage of.....gallons of non-dangerous petroleum in the storage shed described below, subject to the provisions of the Petroleum Act 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall remain in force till the.....19 .

The.....19 .

LICENSING AUTHORITY.

Description and location of the storage shed referred to above.

Date of renewal. Date of expiry- Signature of Licensing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

(1) The petroleum shall be stored only in the storage shed which shall be constructed of suitable unflammable material, but the beams, rafters, columns windows and doors

may be of wood. The building shall rest on foundation walls, the walls and floors being suitably finished to form a sump or enclosure not more than 2 feet in depth and capable of receiving and retaining, in cases of accident or emergency, a volume not less than the maximum quantity of petroleum allowed in the building.

2. The storage shed shall not form part of, or be attached to, any building in which any person resides or works or where persons assemble for any purpose unless it is separated therefrom by a substantial floor or partition which is constructed of unflammable material and has no opening in it.

3. The storage shed, if in any building, shall not be situated under any staircase or under any other means of exit likely to be required to be used for escape in case of fire.

4. No alterations shall be carried out in the storage shed without the previous sanction in writing of the Licensing Authority.

5. If the Licensing Authority calls upon the holder of a license, by a notice in writing to execute any repairs to the storage shed, which may, in the opinion of such authority, be necessary for the safety of the shed, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

6. Any two storage sheds not more than 15 feet apart shall be deemed to be one storage shed.

7. Non dangerous petroleum shall be packed in air-tight tins or drums of steel or iron or in other receptacle not easily broken.

8. The drum or other receptacle containing petroleum shall only be opened in the licensed premises and for the time necessary for drawing off the petroleum, and during such drawing off every reasonable precaution shall be adopted for preventing the escape of petroleum or the vapour therefrom.

9. Adequate precautions shall be taken to prevent unauthorised persons having access to any petroleum kept and to any receptacles which contain or have contained petroleum.

10. Adequate precautions shall be taken at all times for the prevention of the accident by fire or explosion.

11. Every care shall be taken to prevent any petroleum

escaping into any drain, sewer, river or watercourse.

12. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property shall be reported to the nearest Magistrate or to the Officer-Incharge of the nearese police station immediately and by telegraph or telephone where such means of communication are available.

13. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and conditions of this license are duly observed.

FORM I

(Article 4 of Schedule I.)

License to store petroleum in a tank or tanks in connection with a pump outfit for fuelling motor conveyances.

No.

Fee Rs.

License is hereby granted to _____ valid only for the storage of _____ gallons of petroleum in a tank (tanks) in the licensed premises described below and shown on the plan hereto attached subject to the provisions of the Petroleum Act, 1998. and the rules made thereunder and to the further conditions on the back of this license.

This license shall be renewable for _____ years in the absence of contravention of the provisions of the Petroleum Act, 1998 or of the rules framed thereunder or of any condition of this license.

This licence shall remain in force till the _____
19 .

The _____ 19 .

LICENSING AUTHORITY.

Plan No. _____ *Dated* _____

Description of the licensed premises referred to above. The licensed premises are situated _____ and consist of a gas-tight tank (tanks of a capacity of _____ gallons sunk _____ underground.

Date of renewal. Date of expiry. Signature of Licensing
 Authority.

Conditions of Licence.

1. The petroleum shall be stored in one or more gas-tight metal tanks of a capacity of———gallons sunk completely underground in the position shown on the plan attached hereto and each placed in a masonry or concrete pit, the tank being packed round with sand, earth or clay so that no air-space is left between the tank and the masonry or concrete pit and the tank is not visible. Such masonry or concrete pit shall not be obligatory if the tank is a welded one tested upto a pressure of 3 lbs. per square inch and is buried and is on private, leased or rented land away from public traffic. The space over the buried tanks must not be used for any purpose.

2. There shall no openings in any tank other than those necessary for the introduction or removal of the petroleum or for ventilating or dipping the tank. The filling and dipping pipes shall be carried down nearly to the bottom of the tank.

3. Every tank shall be fitted with a vent pipe leading into the open air. The vent pipe shall be securely supported and shall be not less than 12 feet in height. The upper opening shall be covered with the fine copper or other non-corroding metal wire gauze of mesh not less than 28 to the linear inch and fitted with a hood or the upper opening shall be fitted with an inlet valve and an exhaust valve.

4. After that no pump or tank shall be erected inside a building and if prior to that date any tank is installed inside a building, it shall only be filled from a tank-wagon through an under-ground filling pipe having a filling point in the open air at a distance of not less than 12 feet from the building.

5. No alteration of the position of a pump or tank and no replacement of a tank shall be effected except with the previous sanction in writting of the Licensing Authority. All alterations sanctioned under this condition shall be shown on an amended plan to be attached to this licence.

6. If the Licensing Authority calls upon the holder of a licence by a notice in writing to execute any repairs to the licensed premises which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the licence shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

7. Every tank, before being repaired, shall be cleared of all potroleum and of all inflammable vapours. When a tank in position is open for cleaning or repairs no electric or other

lamps, electric cables or electric fans shall be brought near the manhole of the tank until the tank has been certified in writing to be 'gas free' by a qualified Chemist or Engineer. (The inside of the tank may be lighted by the use of mirrors).

8. The petroleum shall enter a tank "under seal" and shall not be supplied to the tank between the hours of sunset and sunrise except by a motor tank-wagon of a type approved by the Inspector General Police for the purpose and with the approval in writing of the Licensing Authority.

9 No artificial light capable of igniting inflammable vapour shall at any time be present in the immediate vicinity of the tank-wagon during the transfer of the petroleum to the tank and no person engaged in such transfer shall smoke. When the underground tank is filled with petroleum from barrels no such light shall be allowed within a distance of 30 feet from the barrels.

10. No petroleum shall be removed from a tank except by means of the pump or pumps at the position marked on the plan hereto attached. Every pump shall together with its connections and fittings be so constructed and maintained as to be gas-and petroleum-tight. The pipe connections between the tank and a pump shall be placed under-ground.

11. For the purpose of charging the tanks of motor vehicles the petroleum shall only be supplied by being :—

(a) pumped through strong metal piping by means of approved pumps into above ground measuring tanks of a capacity not exceeding 30 gallons, fixed in approved position, and run thence through sound hose, fitted with a secure self-closing cock and nozzle, into the tank of motor vehicles, or

(b) pumped through strong metal piping by means of approved pumps into the above ground service tank of approved capacity, fixed in an approved position, and run thence through strong metal piping into measuring tanks of a capacity not exceeding 30 gallons fixed in approved positions and thence through sound hose, fitted with a secure self-closing cock and nozzle, into the tanks of motor vehicles, or

(c) pumped by means of approved measuring pumps, fixed in approved positions, through sound hose fitted with a secure tap and nozzle, into the tanks of motor vehicles.

12. Petroleum may be supplied to a motor vehicle between the hours of sunset and sunrise from the pump

provided that (i) lights other than the electric lights of the vehicle receiving the petroleum are extinguished, (ii) the pump and the vehicle are illuminated by electric light or failing this by some other form of lighting and (iii) no light capable of igniting inflammable vapour is situated or brought within twelve feet of the pump or vehicle receiving the petroleum.

13. (a) Petroleum shall not be placed in any motor vehicle while the engine is running and, where the vehicle is licensed for the conveyance of more than six passengers on hire, while any passenger remains in the vehicle, and

(b) persons in and engaged in connection with any motor vehicle shall not be permitted to smoke while it is being refuelled.

14 Except when absolutely necessary for the purpose of condition 7 or for testing the accuracy of the pump's discharge by means of a standard capacity measure, petroleum shall not be filled from the tank or pump into any receptacle other than one clamped or fitted to a motor vehicle.

15. This licence shall be held to cover the use of a portable kerbside-pump outfit for a period of not more than one month in the place of the licensed permanent outfit in the event of the latter being out of order, provided notice in writing is given to the Licensing Authority before the portable pump is taken into use, and conditions of this licence which apply to a portable pump are observed. No petroleum shall be allowed above ground (except that actually in the pump) in any case where the underground tanks can be used in connection with the portable pump by making a temporary connection from the portable pump to the underground tank.

16. In case where portable pumps are used not more than two barrels of petroleum in reserve shall be kept within 20 feet of the pump or on public property nearby.

17. A licensee who stores dangerous petroleum intended for sale may stock in a building within the licensed premises not more than 6 gallons of dangerous petroleum in securely closed two-gallon standard tins, and shall, if so required by the District Authority, stock at least 2 gallons.

18. Adequate precautions shall be taken to prevent unauthorised persons from having access to the petroleum or to the vessels which contain or have contained petroleum.

19. Every person managing or employed on or in connection with the licensed premises shall abstain from any act whatever which tends to cause fire or explosion and which is not reasonably necessary and, to the best of his ability, shall prevent any other person from doing such act.....

20. Every care shall be taken to prevent any petroleum escaping into any drain or sewer.

21. The licensee shall provide for each pump, whether kerbside or portable, a minimum of two tins or drums of dry sand which shall be kept ready for extinguishing fires.

22. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property, shall be reported to the nearest Magistrate or to the Officer-Incharge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

23. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this licence are duly observed.

FORM J.

(Article 5 of Schedule 1.)

Licence to import dangerous petroleum and to store petroleum in installations.

No.

Fee. Rs.

Licence is hereby granted to _____ valid only for the importation of _____ gallons of dangerous petroleum and for the storage of _____ *gallons of petroleum in the place described below and shown on the plan attached hereto subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this licence.

This licence shall remain in force till the _____
19 .

Gallons.

*Dangerous petroleum in bulk ...

Dangerous petroleum otherwise than in bulk ...

Non-dangerous petroleum in bulk ...

Non-dangerous petroleum otherwise than in bulk ...

Total ...

The _____ 19 .

LICENSING AUTHORITY.

Plan No. _____ Dated _____

Description of the plan referred to above.

Date of renewal. Date of expiry.

Signature of Licencing
Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. Petroleum shall be kept only in the storage tanks and storage and filling sheds or other approved places within the installation specified for the purpose on the plan attached hereto.

2. (i) The tank or tanks shall be supported on an approved foundation and shall be surrounded by a wall or embankment of substantial construction, or shall be partially sunk in an excavation. The enclosure thus formed shall contain only one of the following classes of petroleum, shall be of dimensions sufficient to contain the quantity of petroleum specified under the class to be stored and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid, whether under the action of fire or otherwise.

- (a) Dangerous petroleum 10 percent, more petroleum than the tank or tanks are capable of containing ;
- (b) Non-dangerous petroleum other than heavy petroleum the amount of petroleum the tank or tanks are capable of containing ;
- (c) Heavy petroleum the amount of petroleum the largest tank in the enclosure is capable of containing ;

Provided that heavy petroleum may be stored in the same enclosure as non-dangerous petroleum other than heavy petroleum if the dimension under (b) above is observed.

(ii) Except for the necessary pipes and valves the space within an enclosure and not occupied by the tank or tanks, shall be kept entirely clear and unoccupied. Alternatively gas-tight metal tanks may be sunk completely underground the tanks being packed round with sand, earth or clay, so that no air-space is left below ground level and the tank is not visible. Tanks so buried shall not be required to maintain the safety distances laid down in condition 8 but the space over the buried tanks must not be used for any purpose. The filling and dipping pipes in an underground tank shall be carried down to the

bottom of the tank.

3. All tanks shall be fitted with a vent pipe leading into the open air, the open end being covered with fine copper or other non corroding metal wire gauze of mesh not less than 28 to the linear inch and fitted with a hood or the tank shall be fitted with an approved relief valve or other approved means for preventing dangerous internal or external pressures being produced.

4. Cast iron valves are not permitted on any tank and all valves in an installation must be permanently marked in a manner clearly indicating the direction of opening and shutting the valve.

5. Pumps shall be placed only in the positions shown on the plan attached hereto and they shall together with all connections and fittings be so constructed and maintained as to prevent leakage of petroleum.

6. Storage or filling sheds shall be constructed of suitable unflammable material. The building shall rest on foundation walls and shall be surrounded by a wall or embankment of substantial construction or the walls and floor shall be suitably finished to form a sump or enclosure not more than 2 feet deep. A combination of these methods is permissible. The enclosure or sump thus formed shall be of sufficient capacity to contain the total quantity of petroleum liable at any time to be present in the building and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid whether under the action of fire or otherwise. In the case of dangerous petroleum or partly dangerous and partly non-dangerous petroleum the enclosure or sump shall be capable for receiving and retaining a volume not less than 5 per cent, in excess of the maximum quantity allowed in the building. The sumps and enclosures must be kept clean and free from any accumulation of inflammable liquids.

7. Every storage or filling shed in which dangerous petroleum is stored or filled shall be adequately ventilated near the ground level immediately above any walls constructed to prevent any leakage of petroleum and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze of mesh not less than 20 to the linear inch.

8. (a) A distance of not less than 100 feet shall be kept clear between (i) a storage tank and any other storage tank, (ii) between a storage tank and a storage or filling shed the distance being measured between the nearest points of the perimeters of the storage tanks or storage or filling sheds, as

the case may be.

(b) A distance of not less than 150 feet shall be kept clear between any storage tank or storage or filling shed and any protected work.

(c) Notwithstanding anything contained in clause (a) or clause (b)

(i) Where the quantity of dangerous petroleum or partly dangerous and partly non-dangerous petroleum not in bulk to be stored in a storage shed does not exceed 50000 gallons, the following reduced distances may be kept clear between the shed or enclosure wall and (a) any other building forming part of the installation, (b) any protected work, or (c) any storage tank containing non-dangerous petroleum having a capacity not exceeding 30,000 gallons :—

	Feet
Not exceeding 1,000 gallons	20
Exceeding 1,000 gallons but not exceeding 10,000 gallons.	30
Exceeding 10,000 gallons but not exceeding 20,000 gallons.	40
Exceeding 20,000 gallons but not exceeding 30 000 gallons.	50
Exceeding 30,000 gallons but not exceeding 40,000 gallons.	60
Exceeding 40,000 gallons but not exceeding 50,000 gallons.	70

(ii) When a storage tank containing non-dangerous petroleum has a capacity not exceeding 100,000 gallons, a distance of not less than 50 feet may be kept clear between it and (a) another such tank of similar or less capacity, or (b) a storage or filling shed containing non-dangerous petroleum.

Such a storage tank and storage or filling shed may, where the total quantity stored does not exceed 200,000 gallons, keep a distance of not less than 50 feet clear between the enclosure wall or embankment and any protected works.

(iii) When a storage tank containing non-dangerous petroleum has a capacity not exceeding 50,000 gallons, a distance of—

(a) for horizontal tanks, not less than one-third

- (b) for perpendicular tanks, not less one-half the height of the tank may be kept clear between it and (a) another such tank or (b) a storage or filling shed wherein non-dangerous petroleum is stored in quantity not exceeding 50,000 gallons.

Such a storage tank and storage or filling shed may, where the total quantity stored does not exceed 100,000 gallons keep a distance of not less than 20 feet clear between the enclosure wall or embankment and any protected works.

(iv) In the case of heavy petroleum a distance of not less than 20 feet may be kept clear between a storage tank and (a) another such tank or (b) a storage or filling shed containing such petroleum and a distance of not less than 50 feet shall be kept clear between such storage tank or filling or storage shed and any protected works. When the total quantity stored in such storage tank and storage or filling shed does not exceed 100,000 gallons, half the distances given in clause (iii) for the like quantity of non-dangerous petroleum other than heavy petroleum may be observed.

9. The distances specified in condition 8 may be reduced by the Licensing Authority in cases where screen walls are provided or other special precautions taken or where there are special circumstances that, in his opinion, warrant the alteration.

10. Notwithstanding anything herein to the contrary when petroleum is stored in an installation at or near wells, pumping stations or refineries, the concessions in clause (c) of condition 8 shall not apply and no storage tank, the capacity of which exceeds 50,000 gallons, or storage or filling shed shall be placed nearer than 300 feet to any still, boiler, furnace or fire. In such an installation all tanks shall be situated in a compact area (a) under a single control, (b) enclosed or capable of being enclosed by one continuous fence, (c) on which there shall be no protected works.

11. No alterations shall be carried out in the installation without the previous sanction in writing of the Licensing Authority. Such alterations so sanctioned shall be shown on an amended plan to be attached to this license.

12. If the Licensing Authority calls upon the holder of a license, by a notice in writing, to execute any repairs to the licensed premises, which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice as may be fixed by the notice.

13. The responsible agent or supervisor referred to in Rule 92 shall not allow any person to enter a tank, which has contained petroleum, unless—

(a) Such person wears a safety helmet of a description approved by Licensing Authority, or

(b) (i) the responsible agent or supervisor has certified in writing, as the result of an examination of the tank by himself or by some other competent person, that the atmosphere in the tank is fit for persons to enter, and

(ii) at least one safety helmet of a pattern approved by the Licensing Authority shall have been kept ready for the instant use at the manhole of the tank which is being cleaned or repaired.

14. No work involving the use of fire, welding or hot rivetting, shall be performed in or on any tank until the tank has been certified in the manner laid down in clause (b) of condition 13 to be free from petroleum vapour. When any water is pumped into or withdrawn from the tank no further work of the above description shall be done until the tank has re-tested and a fresh certificate issued. When a tank is open for cleaning or repairs no lamps of any description either ordinary or electric, electric torches, electric cables or fans other than of a flame-proof type satisfying No. 229 the requirements of the British Standard Specification No. 22 shall be brought near the tank.

15. No person shall repair or cause to be repaired any receptacle or pipe in which, to his knowledge, any petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle or pipe has been rendered free from petroleum and any inflammable vapour ;

Provided that this condition shall not be deemed to prohibit the usual soldering operations connected with the filling and despatching of petroleum receptacles.

16. All empty receptacles which have contained dangerous petroleum shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum and inflammable vapour.

17. Adequate precautions shall be taken at all times for the prevention of accident by fire or explosion.

18. Every care shall be taken to prevent any petroleum escaping into any drain, sewer harbour, river or water course and enclosures or sumps must not be permanently connected with any drain or sewer.

19. Any accident, fire or explosion occurring within the area specified in the license, which is attended with loss of human life or serious injury to person or property shall be reported to the nearest Magistrate or to the Officer-In Charge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

20. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

FORM K.

(Article 6 of Schedule 1.)

License to import and store dangerous petroleum otherwise than in bulk and to store otherwise than in bulk (a) non-dangerous petroleum in quantity exceeding 5,000 gallons, or (b) partly dangerous petroleum and partly non-dangerous petroleum.

No.

Rs.

License is hereby granted to _____ valid only for the importation of _____ gallons of dangerous petroleum and _____ gallons of non-dangerous petroleum in the storage shed described below and shown on the plan attached hereto, subject to the provisions of the Petroleum Act 1998 and the rules made thereunder and to the further conditions on the back of this licence.

This license shall remain in force till the 19 .

The

19 .

LICENSING AUTHORITY.

Plan No. _____, dated _____
Description of the storage shed referred to above.

Date of renewal.

Date of expiry.

Signature of
Licensing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. The petroleum shall be stored only in the storage shed which shall be constructed of suitable unflammable material provided that, when only non-dangerous petroleum is stored, the beams, rafters, columns, windows and doors may be of wood. The building shall rest on foundation walls and shall be surrounded by a wall or embankment of substantial construction or the walls and floor shall be suitably finished to form a sump or enclosure not more than two feet deep. A combination of these methods is permissible. The enclosure or sump thus formed shall be of sufficient capacity to contain the total quantity of petroleum liable at any time to be present in the building and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid whether under the action of fire or otherwise. In the case of dangerous petroleum or partly dangerous and partly non-dangerous petroleum the enclosure or sump shall be capable of receiving and retaining a volume not less than 5 per cent in excess of the maximum quantity allowed in the building. The sumps and enclosures must be kept clean and free from any accumulation of inflammable liquids.

2. The storage shed, if it is used for the storage of dangerous petroleum, shall be adequately ventilated near the ground level immediately above any walls constructed to prevent any leakage of petroleum and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze of mesh not less than 28 to the linear inch.

3. If the Licensing Authority calls upon the holder of a license, by a notice in writing to execute any repair to the licensed premises which may, in the opinion of such authority, be necessary for the safety of the premises, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

4. No alteration shall be carried out in the licensed premises without the previous sanction in writing of the Licensing Authority. All alterations shall be shown on an amended plan to be attached to this license.

5. The following distances shall be kept clear at all times between protected works and a storage shed or an enclosure wall used for the storage of dangerous petroleum or partly dangerous and partly non-dangerous petroleum :—

Quantity to be stored.

Distances to be
Kept clear.

Feet

Not exceeding 500 gallons	...	20
Exceeding 500 gallons but not exceeding 1,000 gallons.		25
Exceeding 1,000 gallons but not exceeding 5,000 gallons.		30
Exceeding 5,000 gallons but not exceeding 20,000 gallons.		40
Exceeding 20,000 gallons but not exceeding 30,000 gallons		50
Exceeding 30,000 gallons but not exceeding 40,000 gallons.		60
Exceeding 40,000 gallons but not exceeding 50,000 gallons.		70
Exceeding 50,000 gallons	...	100

6. The following distances shall be kept clear at all times, between protected works and a storage shed or an enclosure wall used for the storage of non-dangerous petroleum only :—

Quantity to be stored.

Distance to be
Kept clear.

Feet

Exceeding 5,000 gallons but not exceeding 10,000 gallons.	15
Exceeding 10,000 gallons but not exceeding 50,000 gallons.	20
Exceeding 50,000 gallons	... 30

7. The distances specified in conditions 5 and 6 may be reduced by the Licensing Authority in cases where screen walls are provided or other special precautions taken or where there are special circumstances that, in his opinion, warrant the reduction.

8. Drums or other receptacles containing petroleum shall only be opened in the licensed premises and for the time necessary for drawing off the petroleum, and during such drawing off every reasonable precaution shall be adopted for preventing the escape of petroleum or the vapours therefrom.

9. All empty receptacles which have contained dangerous petroleum shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum and inflammable vapour.

10. No person shall repair or cause to be repaired any receptacle in which, to his knowledge, any petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle has been rendered free from petroleum and any inflammable vapour ;

Provided that this condition shall not be deemed to prohibit the usual soldering operations connected with the filling and despatching of petroleum receptacles when such operations are conducted in an approved place outside the storage shed.

11. Adequate precautions shall be taken at all times for the prevention of accident by fire or explosion.

12. Every care shall be taken to prevent any petroleum escaping into any drain, sewer, river or water course

13. Adequate precaution shall be taken to prevent unauthorised persons having access to any petroleum kept and to any receptacles which contain or have contained petroleum.

14. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to persons or property shall be reported to the nearest Magistrate or to the Officer-In-charge of the nearest police station immediately and by telegraph or telephones where such means of communication are available.

15. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

SCHEDULE III.

METHODS OF TESTING PETROLEUM.

Determination of Flashing-point.

(See rules 95 and 98)

1. APPARATUS TO BE USED.

The flashing-point of petroleum and petroleum mixtures which are fluid at 50° F and which flash not above 120° F, shall be determined by the Abel Apparatus as hereinafter defined.

The flashing-point of petroleum and petroleum mixtures which are sold at 50° F and which flash, not above 120° F shall be determined by the Abel Apparatus, the test being modified as hereinafter described.

The flashing-point of petroleum and petroleum mixtures which flash above 120° F shall be determined by the Pensky Martens Apparatus as hereinafter defined.

II PREPARING THE SAMPLES FOR TEST

About ten fluid ounces of the sample, sufficient for three tests, should be transferred from the bottle, into which the sample has been drawn to a pint flask or bottle, which should be immersed in water artificially cooled until a thermometer introduced into the sample, indicates a temperature not exceeding 50 F.

III (i) ABEL APPARATUS

The apparatus to be employed shall be the Abel Petroleum Testing Apparatus modified by having an oil cup provided with a stirrer. It shall be constructed to the dimensions here in specified within the limits of accuracy prescribed by the tolerances set forth below.

Oil cup—The oil cup consists of a cylindrical vessel open at the top, and fitted on the outside with a flat circular flange projecting at right angles.

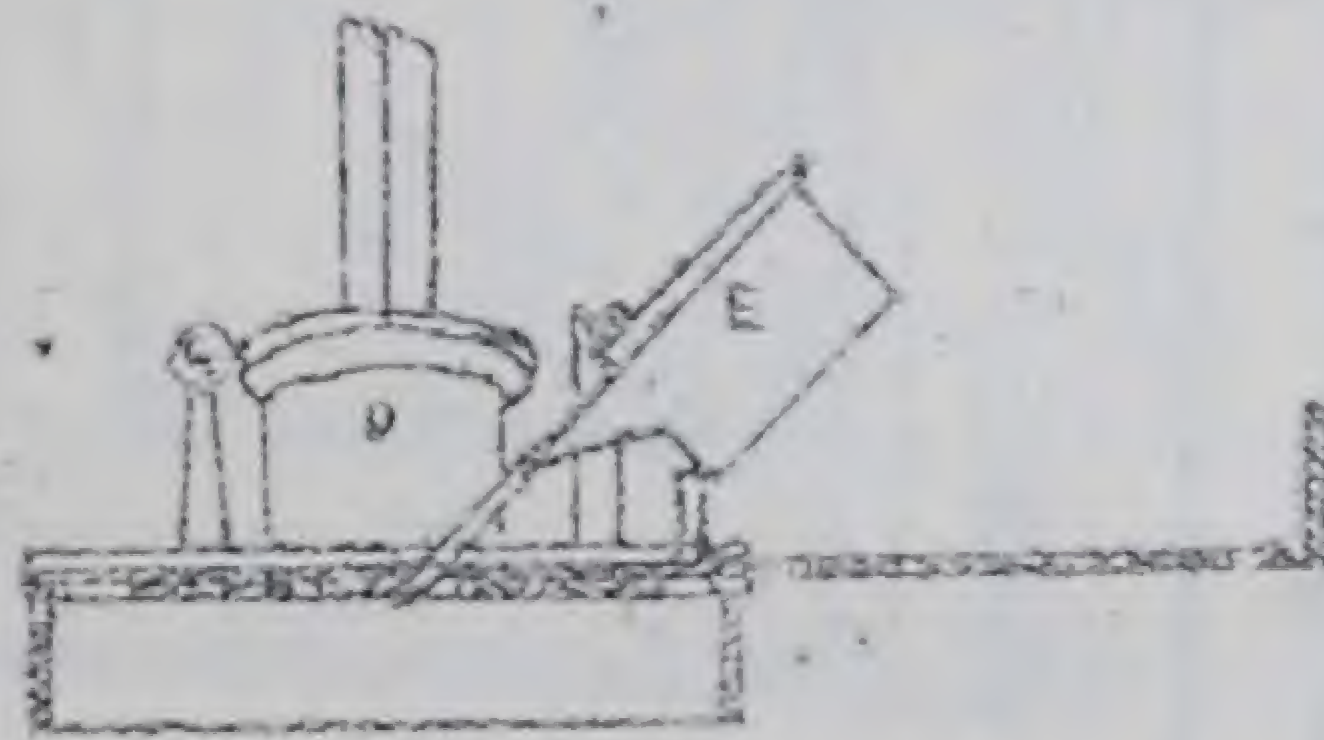
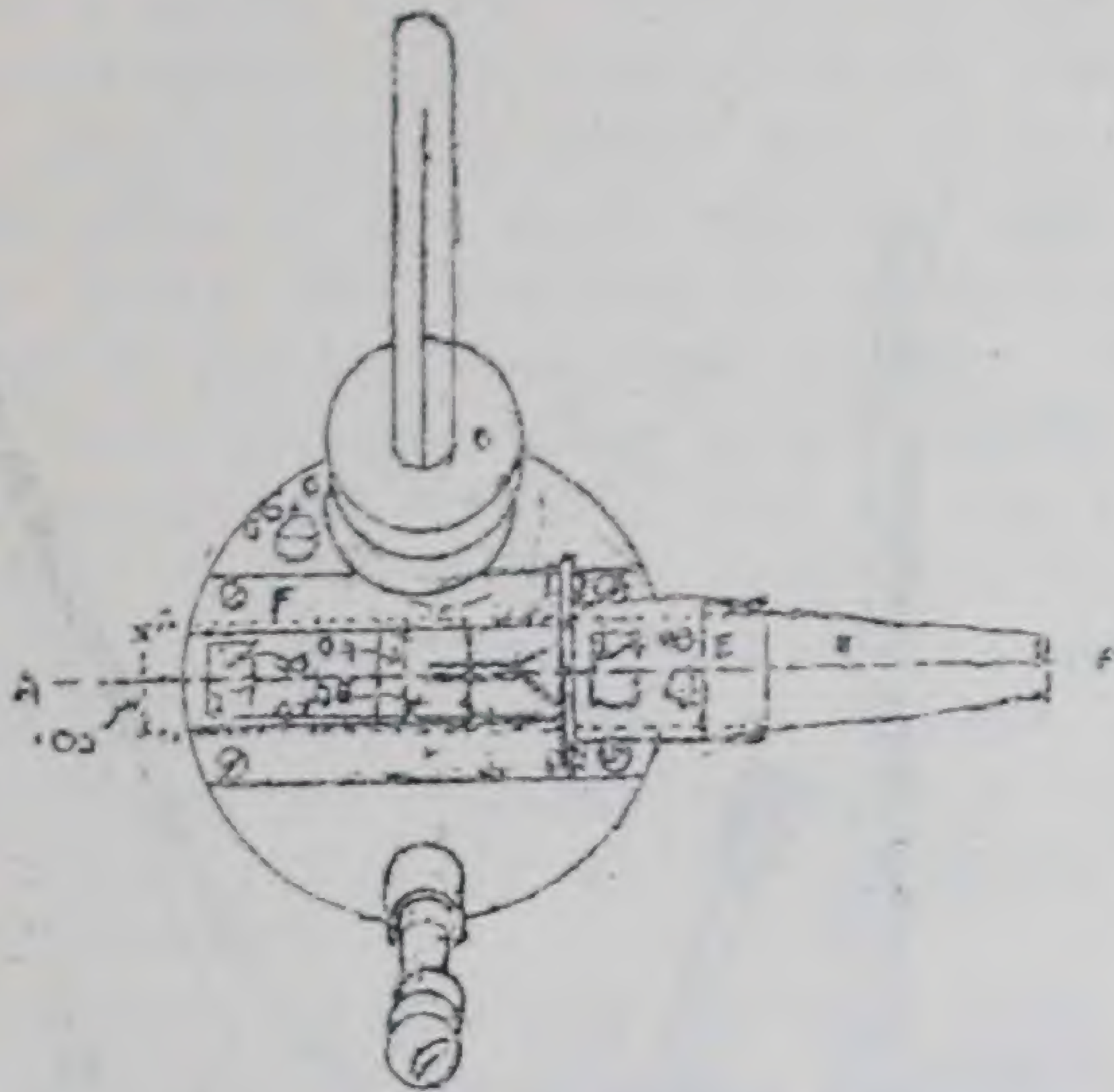
Within the cup, fixed thorough the wall and silver soldered

or brazed in place, there is a gauge consisting of a piece of wire bent upwards and terminating in a point.

Material— Brass or gun-metal.

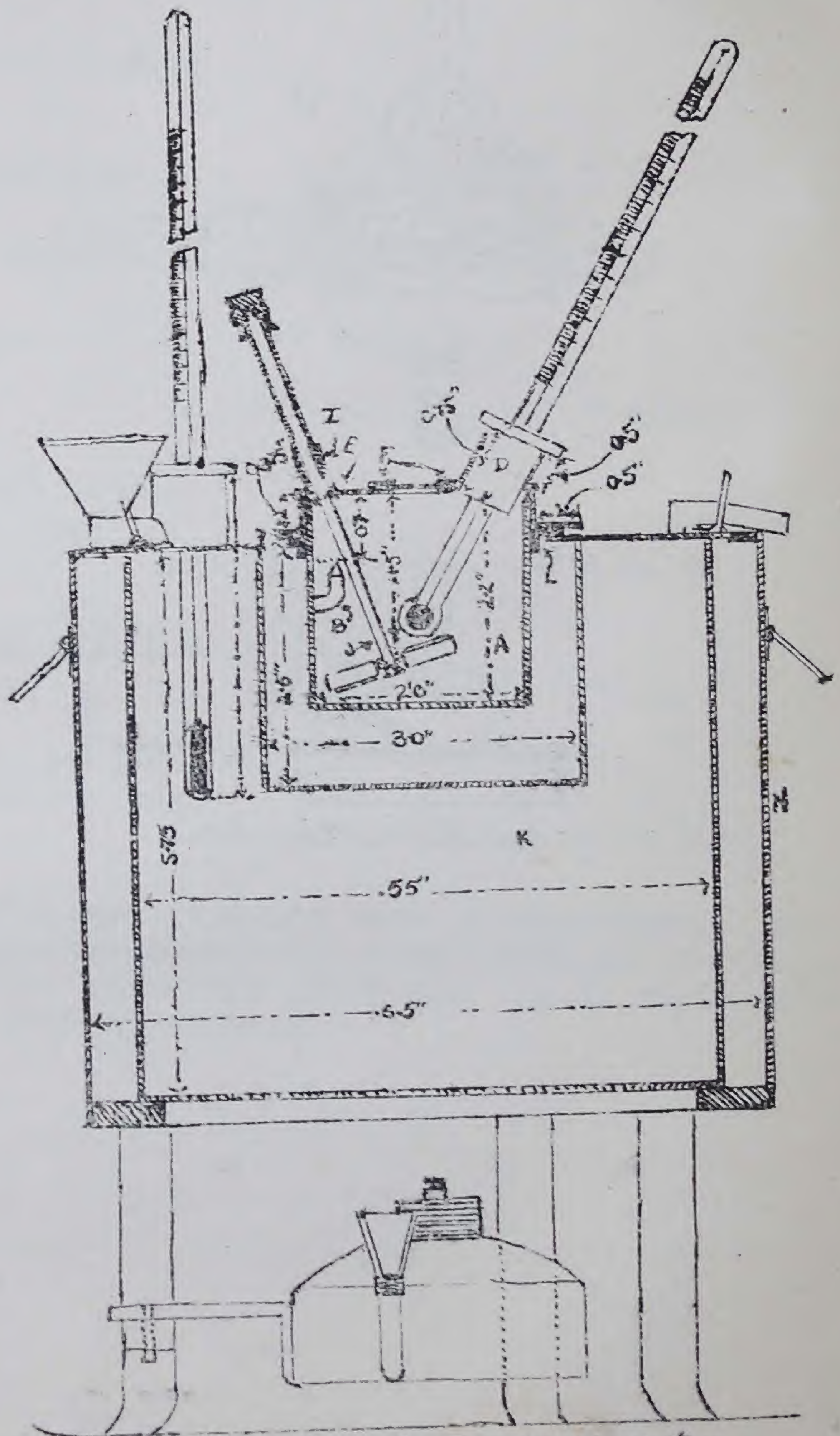
	Dimension.	Tolerance. in.
Cup, wall and bottom thickness	17 I. W. G.	...
Cup, internal diameter ...	2 in.	$\pm$ 0. 05
Cup, internal depth ...	2 2 in.	$\pm$ 0. 05
Flange, thickness ...	17 I. W. G.	...
Flange width ...	0. 5 in.	$\pm$ 0. 05
Flange, distance of upper side from top edge of cup	0. 375 in.	$\pm$ 0. 05
Gauge, thickness not less than	10 I. W. G.	...
Gauge, distance of point from level of upper edge of cup	0. 7 in.	$\pm$ 0. 005

Cover—The cup provided with a close-fitting cover with a downward projecting rim barely reaching the flange on the cup. The downward projecting rim is made solid with the top or silver soldered.



Section on .AA.

or brazed in place. Upon the cover are mounted a thermometer socket, trunnions to support an oil test-lamp a pair of guides in which a slide



Abel Flash Point Apparatus

COVER OF ABEL FLASH-POINT APPARATUS.

(Slide open.)

moves, and a white bead. The top of the cover is pierced by three rectangular holes symmetrically placed on a diameter one in the centre and the other two as close as practicable to the inner sides of the cover rim and opposite each other. These three holes are covered or uncovered by means of a slide-moving in suitably disposed guides. The slide has two perforations, one corresponding in all particulars to the centre hole in the cover and other to one of the holes at the side. The movement of the slide is restricted by suitable stops, and its length and the disposition of the holes are such, that at the outer extremity of the movement of the slide, the holes in the cover are simultaneously just completely opened and at the inner extremity of the movement of the slide they are completely closed.

The trunnions supporting the test lamp are fixed on the top of the guides and the lamp is mounted in the trunnions so that it is free to oscillate. The lamp is provided with a jet to contain a wick and is so arranged that when the slide is moved so as to uncover the holes, the oscillating lamp is caught by a pin fixed in the slide and tilted over the central hole in such a way that the lower edge of the cover bisects the circle formed by the bore of the jet when in the lowest position. The flame then occupies a central position within the hole in both directions.

A suitably mounted gas-jet may be substituted for the lamp.

	Dimension.	Tolerance. in.
Cover thickness ...	0.05 in ...	± 0.015 .
Cover, central hole, length (in direction of slide) ...	0.5 ,, ...	± 0.005 .
Cover, central hole, width.	0.4 ,, ...	± 0.005 .
Cover, peripheral holes, length (in direction of slide) ...	0.2 ,, ...	± 0.005 .
Cover, peripheral holes, width ...	0.3 ,, ...	± 0.005 .

	Dimension.	Tolerance. in.
Slide, thickness ...	20 I. W. G.	.....
Slide, width of upper surface ...	0.5 in ...	+ 0.01 (excess only).
Lamp, over all length of jet ...	Approx. 0.6 „ ...	To suit the requirements for the position of the jet when tilted.
Lamp, bore of jet at end.	0.0625 in.	± 0.005 .
Bead, diameter ...	0.15 in ...	± 0.01 .
Thermometer Socket Internal diameter ...	0.6 in ...	± 0.01 .
Length of short side measured from under surface of cover ...	Approx. 0.5 in ...	.....
Length of long side measured from under surface of cover ...	Approx- 0.75 in...	.....
Distance of centre of socket from centre of cover measured on the under side ...	Approx. 0.7 in ...	.....
These dimensions are subject to the correct placing of the thermometer when in position ...	.....	.....
Vertical depth of lowest part of thermometer below centre of under side of cover ...	1.5 in ...	± 0.1 .

The thermometer socket is in the form of a split tube, mounted on a diameter at right angles to the diameter through the centre of the holes, and fitted at such an angle as to bring the bulb of the thermometer when in place, vertically below the centre of the cover and at the correct distance from it.

A white bead, the dimensions of which represent the size of test flame to be used, is mounted in a visible position on the cover.

Materials.—All parts excepting bead, brass or gun-metal. Bead ivory or other suitable material.

Cover fitted with stirrer.—Provisions may be made in the cover for the reception of a stirrer which projects into the oil cup, for use with viscous materials only.

A bush is mounted on the cover in a position diametrically opposite the thermometer mounting, and its length is such and it is set at such an angle that the stirrer rod clears the oil-level gauge and the blades operate below the level of, and without fouling, the thermometer bulb. The bush is placed as near as practicable to the outer edge of the cover.

	Dimension.	Tolerance. in.
Stem, length, overall ...	4 in	± 0.1 .
" " lower and to point of attachment of blades ...	Approx. 3.1 in ...	.....
Stem length lower and to upper surface of collar...	1.9 in	± 0.1 .
Stem, length, upper surface of collar to lower end of thread ...	2 in	± 0.1 .
Stem, diameter ...	Approx. 0.125 in	.....
" " of collar ...	" 0.25 in	.....
" thread ...	7 B. A.	.....
Blades, thickness ...	17 I. W. G.	.....

	Dimension.	Tolerance. in.
Blades, length excluding root	... 0.5 in ...	+ 0. - 0.
Blades, breadth (all corners of blades rounded)	5/16 in (0.3125 in)	+ 0.01. - 0.
Blades, angle	... Approx. 45 ...	.....
Sleeve, length	... To suit stem giving free rotation with no appreciable vertical play when screwed home ...	.....
Diameter of bore	... Sliding fit on stem	.....
„ „ collar	... Approx. 0.25 in	.....

The stirrer consists of a round stem having four blades or vanes silver soldered in place at one end. A collar is fixed on the stem so that when the stem is inserted into the bush from below, it is arrested at a position such that the correct length protrudes into the oil cup. The top end of the stem is reduced and screwed.

A longer sleeve having an internally screwed, knurled knob soldered to its upper end, is passed over the upper end of the stem and screwed home. The length of the sleeve is such that a flat-faced collar at its lower end just comes into contact with the upper end of the bush, leaving the stirrer free to rotate without appreciable vertical play.

A flat-headed cylindrical plug is provided for insertion in the bush when the stirrer is not in use.

Material—Brass or gun-metal.

Heating vessel.—The heating vessel or bath consists of two flat-bottomed cylindrical copper vessels placed coaxially one inside the other and soldered at their tops to a flat copper ring, greater in outside diameter than the larger vessel and of smaller inside diameter than the smaller vessel. The space between the two vessels is thus totally enclosed and is used as a water jacket.

	Dimension.	Tolerance. in.
Inner vessel, thickness ...	24 I. W. G.	.....
" " internal diameter ...	3 in	... ± 0.05 .
Inner vessel, internal depth ...	2.5 in	... ± 0.05 .
Outer vessel, thickness, not less than ...	24 I. W. G.	... ..
Outer vessel, internal diameter ...	5.5 in	... ± 0.1 .
Outer vessel, internal depth ...	5.75 in	... ± 0.1 .
Top plate, thickness, not less than ...	20 I. W. G.	.....
Top plate, outer flange projection ...	0.375 in	... ± 0.1 .
Top plate, diameter of central hole ...	To suit ebonite or fibre ring-clear- ance not to ex- ceed 0.1 in	... ..
Ebonite or fibre ring, internal diameter ...	Easy fit on oil cup	.....
Ebonite or fibre ring, external diameter of flange ...	2.75 in	... ± 0.02 .
Ebonite or fibre ring, overall depth of spigot	0.25 in	... ± 0.02 .
Ebonite or fibre ring, thickness, flange and spigot ...	0.08 in	... ± 0.005 .

	Dimension.	Tolerance. in.
Ebonite or fibre ring, screws, C. S. ...	8 B. A, $\times 0.15$ in	.....
Thermometer socket, internal diameter ...	0.6 in	± 0.01 .
Thermometer socket, height from top of plate	0.75 in	± 0.05 .

An ebonite or fibre ring of right-angle section is fitted into the hole in the centre of the flat ring forming the top of the bath and, when the apparatus is in use, the oil cup fits into, and its flange rests upon, this ebonite or fibre ring so that the oil cup is centrally disposed within the heating vessel. The ebonite or fibre ring is secured in place by means of six small screws having their heads sunk below the surface of the ring, to avoid metallic contact between the bath and the oil cup.

A split socket, similar to that on the cover of the oil cup, but set vertically, allows a thermometer to be inserted into the water-space. A funnel and overflow pipe also communicate with the water-space through the top plate and two loop handles are provided thereon.

The bath rests upon a cast-iron tripod stand, to the ring of which is attached a cylindrical copper jacket not less than 24 I. W. G. flanged inwards at the top, and of such dimensions that the bath, while resting firmly on the iron ring just touches with its outward projecting flange the inward turned flange of the jacket. Two handles are provided on the outer jacket.

DIAMETER OF THE OUTER JACKET 6.5 INCHES ± 0.1 INCH.

Spirit lamp.—A spirit lamp is provided for raising the temperature of the water bath, but any other suitable means may be employed for this purpose.

Thermometers.—Two thermometers are provided, the one for ascertaining the temperature of the bath, the other for determining the flashing-point.

OIL CUP THERMOMETER.

- Type ... Mercury in glass, nitrogen filled, graduated on the stem, enamel back.
- Length ... Approximately 9 inches.
- Stem ... Diameter 0.24 to 0.28 inch.
- Bulb ... Spherical ; made of normal glass approved by the Board of Trade. Diameter, 0.35 inch $\pm$ 0.05 inch.
- Range ... 50° to 150° F. with expansion chamber. Distance from the bottom of the bulb to the 50° line, 2.75 inches to 3.15 inches. Distance from the 50° line to the 150° line, not less than 4.75 inches.
- Immersion... A Swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 2.40 inches $\pm$ 0.05 in.
- Graduation... Scale graduated in 1° F. divisions. Every 5° and every 10° to be indicated by longer lines. Figured at every 10° in full.
- Marking ... "Abel Oil Cup" : Identification number "Fahrenheit maker's or vendor's name or the trade mark.

WATER BATH THERMOMETER.

- Type ... Murcury in glass, nitrogen filled, graduated on the stem, enamel back.
- Length ... Approximately 9 inches.
- Stem ... Diameter, 0.24 to 0.28 inch.
- Bulb ... Cylindrical, made of a normal glass approved by the Board of Trade, length approximately

0.8 inch. Diameter not to exceed the diameter of the stem.

Range ... 90° to 190° F. with expansion chamber
Distance from the bottom of the bulb to the 90 line 3.95 inches to 4.35 inches. Distance from the 90° line to the 190° line, not less than 3.55 in.

Immersion... A swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 3.5 inches. ± 0.1 in.

Graduation ... Scale graduated is 1°F. divisions. Every 5° and 10° to be indicated by longer lines. Figures at every 10° in full.

Marking ... "Abel Water Bath" : Identification number
'Fahrenheit' : maker's or vendor's name or trade mark.

The brass collar of the thermometer is in each case of the following dimensions :—

Outside diameter—push fit in socket.

Thickness of tube—22 I. W. G.

Thickness of flange—0.1 inch. ± 0.001 inch.

III (ii) METHOD.

(1) For Petroleum flashing below 90°F.

The Test Apparatus shall be placed for use in a position where it is not exposed to currents of air or draught.

The heating vessel or water-bath shall be filled by pouring water into the funnel until it begins to flow out at the spout of the vessel. The temperature of the water at the beginning of the test shall be 130°F., and no heat shall be applied to the water-bath during the test. When a test has been completed and it is desired to make another test the water-bath shall be again raised to 130°F., which may conveniently be done while the petroleum cup is being emptied, cooled and refilled with a fresh sample to be tested. The next test is then proceeded with.

If an oil-test lamp is being used it shall be prepared by fitting it with a piece of flat plated candle. Wick and filling it with colza or rape oil up to the lower edge of the opening of the spout or wick tube. The lamp shall be trimmed so that when lighted it gives a flame of about 0.15 of an inch diameter, and this size of flame, which is represented by the projecting white bead on the cover of the oil-cup is readily maintained by simple manipulation from time to time with a small wire trimmer. A gas test flame may be employed and if so, the size of the jet of flame shall be adjusted to the size laid down above.

The bath having been raised to the proper temperature the cup shall be placed on a level surface in a good light, and the oil to be tested shall be poured into it until the level of the liquid just reaches the point of the gauge which is fixed in the cup. Before a test is begun the temperature of the oil shall be determined and shall be brought to approximately 60°F. The cover with the slide closed shall then to be put on to the cup and pressed down so that its edge rests on the rim of the cup and the cup shall be so placed into the bath or heating vessel, every care being taken to avoid wetting the sides of the cup with the oil. The Thermometer in the lid of the cup has been adjusted so as to have the correct immersion when the brass collar of the thermometer is properly seated, and its position shall not in any circumstances be altered. When the cup has been placed in the proper position, the scale of the thermometer faces the operator.

The test-lamp shall then be placed in position upon the lid of the cup. When the temperature has reached 66°F. the operation of testing shall be begun, the test flame being applied once for every rise of one degree, in the following manner :—

The slide shall be slowly drawn open while a metronome, set at 75 to 80 beats per minute, beats three times and shall be closed during the fourth beat. A pendulum of 24 inches effective length may be used in place of the metronome counting one beat from one extremity of the swing to the other.

The barometric pressure shall be observed and recorded. No corrections shall be made except in case of dispute, when the flashing-point figure shall be corrected according to the following rule :—

For each inch (25.4 mm) below 29.92 in. (760 mm) barometric reading add 1.6° F to the flashing-point.

For each inch (25.44 mm) above 29.92 in. (760 mm)

barometric reading subtract 1.6°F from the flashing-point.

(2) For petroleum flashing between 90°F and 120°F .

The air-chamber which surrounds the oil-cup shall be filled with cold water at a depth of 1.5 inches and the heating vessel or water-bath filled as usual, but also with cold water. The lamp shall then be placed under the apparatus and kept there during the entire operation, and the temperature of the oil raised at the rate of 2°F to 2.25°F per minute, the testing being carried out as laid down in the previous section, except that the test flame shall first be applied when the temperature has reached 80°F .

(3) For solid petroleum mixtures

Solid petroleum mixtures are to be tested in the Abel Apparatus in the following manner:—

The solid mixture must be cut into cylinders 1.5 inch long and 0.25 inch in diameter by means of a cork borer or other similar cutter having the correct internal diameter. These cylinders are to be placed in the petroleum cup of the testing apparatus in a vertical position in such number as will completely fill the cup. The cylinders must be in contact with one another, but must not be so tightly packed as to be deformed in shape.

Five or six of the cylinders in the centre of the cup must be shortened to 0.5 inch to allow space for the thermometer bulb.

The air bath of the testing apparatus must be filled to a depth of 1.5 inch with water. The water bath must then be raised to, and maintained at, a temperature of about 80°F .

The cup must then be placed in the air bath, and the temperature of the sample must be allowed to rise until the thermometer in the oil-cup shows 75°F ., when the test flame must be applied.

If no flash is obtained, this temperature must be maintained constant in the oil-cup for one hour, at the expiration of which time the test flame must again be applied.

If a flash is obtained, the solid mixture will be subject to the provisions of the Petroleum Act 1934.

(NOTE).—It may in many cases, save time in testing samples of petroleum mixtures to apply the test flame after the sample has been a few minutes in the cup and while still at the temperature of the room in which the test is being carried out; provided that this temperature is below 76°F . If a flash is obtained by this means, it is unnecessary (for the purpose of the Petroleum Act) to proceed with the test at a higher temperature.

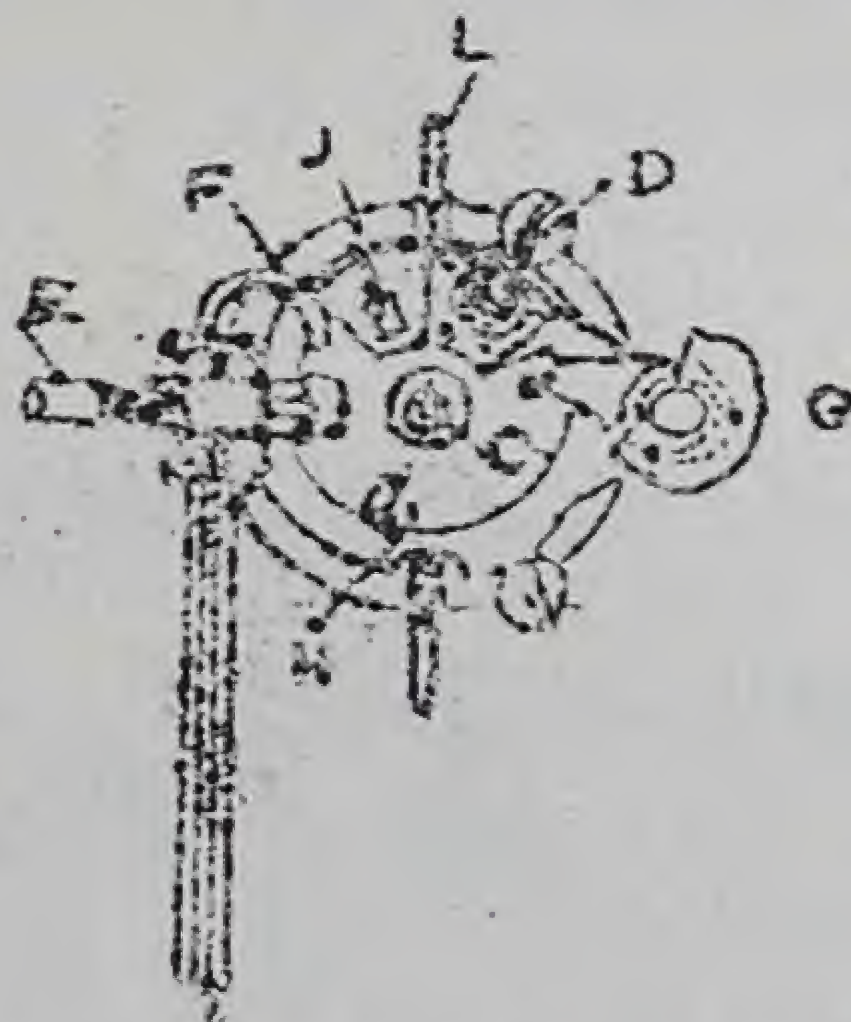
IV (1) The Pensky-Martens Apparatus.

The standard Pensky-Martens Closed Tester shall be used for determining the flashing-point of all petroleum products having a flashing-point above 120°F.

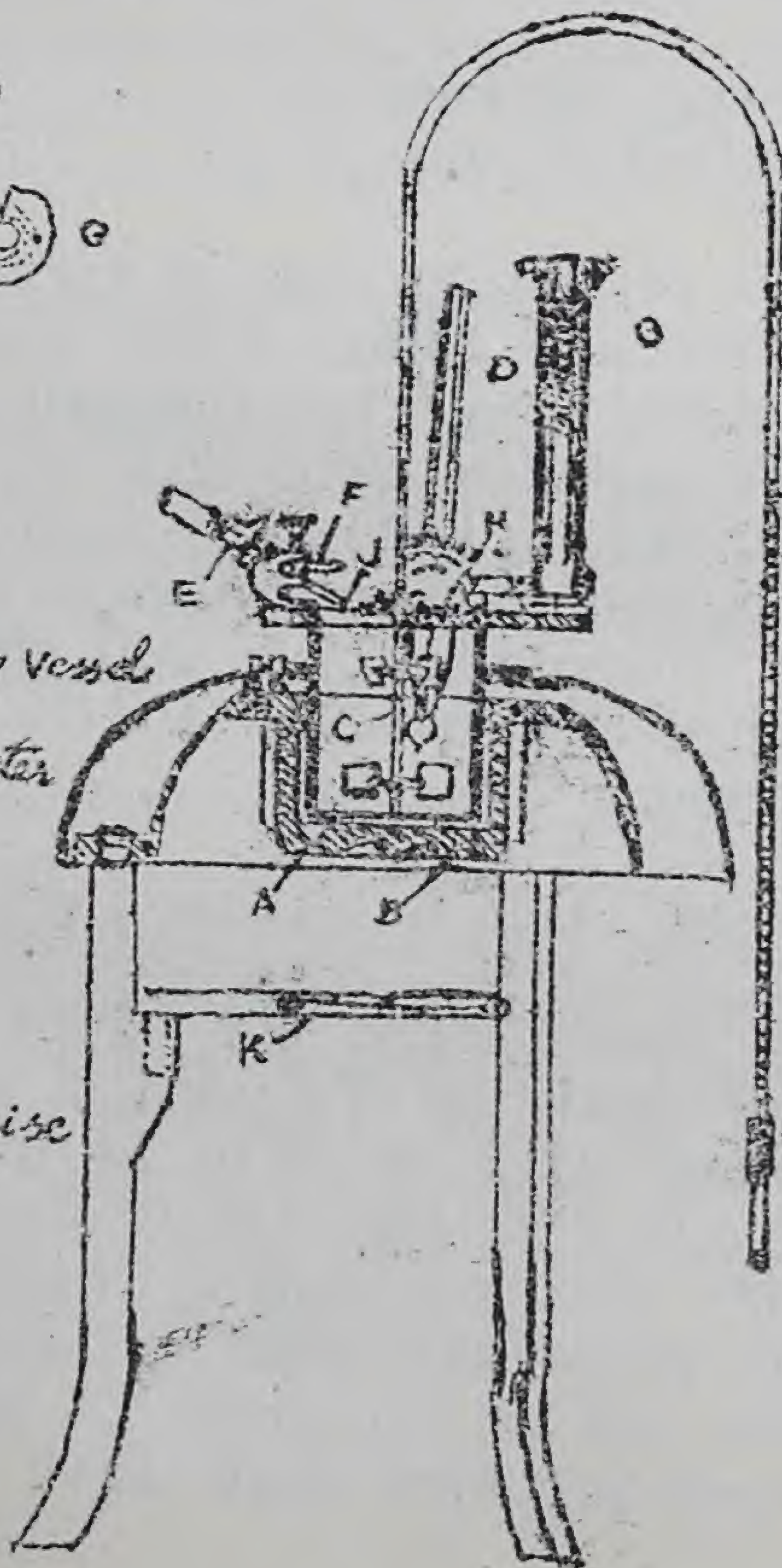
Every instrument shall be marked with the letter I. P. T. an identification number (on the cup, cover and top plate) and the name of the maker or vendor, such stamping implying a guarantee that the instrument complies with the requirements specified below.

The Pensky-Martens Tester shall include the following major parts :

Cup.—The cup of the standard Pensky-Martens Tester shall be made of brass and shall satisfy the following dimensional specifications :—



- A. Oil cup B. Heating vessel
- C. Stirrer D. Thermometer
- E. Ignition lever
- F. Pilot Burner
- G. Spring Handle.
- H. Revolving shutter.
- I. Orifice. K. Gauge Disc
- L. Lifting Hooks.



INCHES.		
Dimensions.	Normal.	Tolerance in.
Inside diameter below filling mark ...	2.000	± 0.050
Difference inside and outside diameters below filling mark ...	0.125	$+ 0.010$
Inside height ...	2.200	± 0.050
Thickness of bottom ...	0.095	± 0.025
Distance from rim to filling mark ...	0.860	± 0.015
Distance lower surface flange to bottom of cup	1.795	± 0.150

The inside of the cup may be turned to a slightly larger diameter above the filling mark and the outside may be tapered above the flange, but the wall thickness at the upper edge shall be not less than 0.04 in. The flange should be approximately 0.5 in wide and approximately 0.125 in thick.

It shall be equipped with devices for locating the position of the lid on the cup and the cup centrally in the stove. A handle, attached permanently to the flange of the cup is a desirable accessory.

NOTE.—If the bottom of the cup is affixed it shall be braced or hard soldered.

Stirring device.—The lid shall be equipped with a stirring device consisting of a vertical steel shaft, not less than 0.1 in nor more than 0.125 in in diameter, mounted in the centre of the cup, carrying two-bladed brass propellers, and provided with any convenient means for operating. The blades of both propellers shall be approximately 0.3 in wide and shall be set at an angle of approximately 45°. The smaller (upper) propeller shall have an over-all diameter of

approximately 0.75 in. The larger (lower) propellers shall have an over-all diameter between 1.25 and 1.75 in. The thickness of the propeller blades shall be not less than 0.048 in nor more than 0.08 in., which limits correspond respectively to No. 18 and No. 14 S. W. G. The propeller blades shall be brazed or hard soldered to collars on the vertical shaft and the collars shall have horizontal and vertical dimensions not greater than 0.4 in.

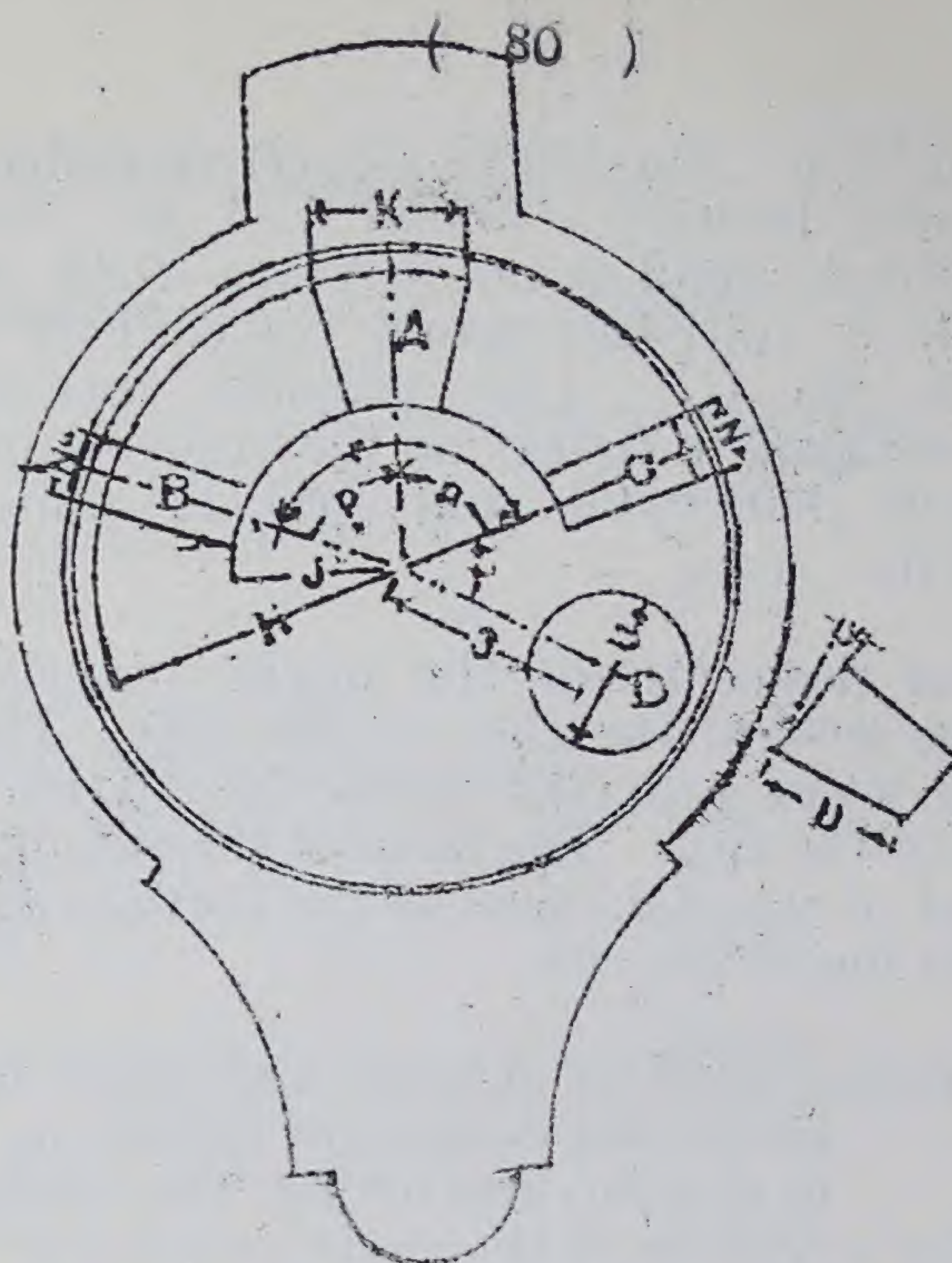
The plane of the centre of the upper propeller shall be 0.4 in., below the level of the rim of the cup. The plane of the centre of the lower propeller shall be 2.0 in., below the level of the rim of the cup. The level of the rim of the cup is in effect the level of the plane part of the portion of the lower surface of the lid inside the rim.

The cover proper shall be of brass and shall have a rim projecting downward almost to the flange of the cup and fitting the outside of the cup closely. The thickness of the cover, measured just inside the rim, shall be not less than 0.03 in., nor more than 0.08 in. There shall be a proper locating device engaging with a corresponding locating device on the flange of the cup.

There shall be four openings in the cover.

Opening A is an area defined by arcs of two concentric circles and the intersected lengths of two radii. The radius of the outer circle shall be not less than 0.94 in., nor more than 0.97 in. The chord of the arc of the outer circle shall be not less than 0.5 in. nor more than 0.54 in.

Opening B and C are equal areas each of the same general form as opening A but of approximately half the (angular) width. The radii of the defining inner and outer circle shall be within the limits specified for the radii of the two circles, arcs of which partially define opening A. The chord of the outer arc for opening B or opening C shall be not less than 0.19 in nor more than 0.22 in. The sum of the areas of openings B and C shall be not less than 75 per cent nor more than 100 per cent of the area of opening A.



H Minimum 0.94 in., maximum 0.97 in.

J „ 0.53 „ „ 0.56 „

K „ 0.50 „ „ 0.54 „

N „ 0.19 „ „ 0.22 „

S Approximately 0.75 in.

U „ 0.5 „

Angles p Equal.

Angle r Minimum 135° maximum 140°.

„ t „ 50° „ 60°.

„ y „ 10° „ 15°.

COVER OF PENSKY-MARTENS TESTER.

Openings B and C shall be equally distant from opening A and radii drawn through each of their centres shall be at an angle of not less than 135° nor more than 140°.

Openings A B and C need not conform exactly to the shape of geometrical figures bounded by arcs of two concentric circles and intersected length of radii. Their boundaries must, however fall on or between the lines indicated by the limiting values of the dimensional specification of the preceding text.

Opening D is a split tube to grip the thermometer collar. It shall be set at an angle of not less than 10° nor more than 15° from the perpendicular. Its centre is approximately 0.75 in., from the centre of the lid and on a radius at an angle of not less than 50° nor more than 60° from the radius passing through the opening C. Its height shall be such that when a standard thermometer is in position, the bottom of the bulb shall be 1.5 in., ± 0.1 in., below the level of the rim of the cup (which corresponds to the lower surface of the portion of the lid inside the rim).

The lid shall be equipped with a brass shutter approximately 0.1 in., thick, operating on the plane of the upper surface of the lid. The shutter shall be so shaped and mounted that it rotates on the surface of the lid about an axis normal to the lid, and through its centre, between two stops so placed that when in one extreme position the openings A, B and C of the lid are completely closed and when in the other extreme position these openings are completely opened.

The tip of the flame jet shall have an orifice 0.027 in. to 0.03 in. diameter. The flame exposure device shall be equipped with an operating mechanism which, when the shutter is in the "open" position, depresses the tip so that the centre of the orifice is between the plane of the under and upper surfaces of the lid proper at a point on a radius passing through the centre of the larger opening A and approximately 0.1 in. from the outer edges of the opening.

The test flame shall be approximately spherical and shall be regulated to be of the same mean diameter as a bead 0.16 in., in diameter of some suitable material mounted on the lid.

The mechanism operating the shutter should be of the spring type and constructed so that when at rest the shutter shall completely close the three openings. When operated to the other extreme the three openings in the lid shall be fully open and the tip of the exposure tube shall be fully depressed.

NOTE.—A pilot for automatic relighting of the test flame should be provided.

Where gas is not available, an oil burner shall be used as

the test flame, the position of which shall correspond with that of the gas flame previously specified.

Heat shall be supplied to the cup by means of a properly designed stove which is equivalent to an air bath. This stove shall consist of (1) an air bath and (2) a top plate on which the flange of the cup rests.

The air bath shall have a cylindrical interior 1.625 in., to 1.56 in. deep and a diameter not less than 0.125 in., nor more than 0.156 in., greater than the outside diameter of the cup, with the minimum clearance of 0.05 in. The air bath shall be a flame-heated metal casting.

NOTE —The casting shall be so designed and used that the temperature of bottom and walls is approximately the same. On this account it should be not less than 0.25 in. thick. The apparatus shall be designed so that products of combustion of the flame cannot come into contact with any part of the cup.

Top plate.—The top plate shall be of metal. The total distance from the upper surface of the plate to the bottom of the air bath shall exceed the distance from the under surface of the flange to the bottom of the cup by not less than 0.063 in nor more than 0.125 in.

The top plate shall be mounted with an air gap between it and the air bath. The top plate may be attached to the air bath by means of three screws and spacing bushings. The spacing bushings should be of proper thickness to define the air gap which shall be not less than 0.125 in nor more than 0.187 in. The spacing bushings shall be not more than 0.375 in diameter.

A low range thermometer shall be used with the Standard Pensky-Martens Tester for determining the flashing point above 120 F. The thermometer shall comply with the specification given below :—

The thermometers shall conform to the following general specifications :—

Type.	Mercury in glass, except where otherwise stated. Engraved stem. Nitrogen filled.
Stem.	The stem shall be made of lead glass or other suitable glass Enamel back.

The bulb, shall be made of a suitable thermometric glass approved by the National Physical Laboratory. At present these glasses

are ;—

	Identification mark.	Approved for temperatures upto.
Normal glass made by James Powel and Sons Ltd.	Single blue stripe.	350°C.
Normal glass made by Frank Tomay and Co. Ltd.	Two blue Stripes.	350°C.
Normal glass Jena III made by Schott and Genossen.	Purple stripe ...	350°C.
Normal glass Gege Eff. Made by Glaswork Cuxtav Fischer.	Blue and a red stripe.	350°C.
Corning Borosilicate made by Corning Glass Co.	... ..	450°C.
Jena 59 iii made by Schott and Genossen.	... ..	450°C.
Jena 2954 iii made Schott and Genossen.	Single black stripe.	450°C.

No contraction chamber shall be above the immersion line and no enlargement of the bore shall be within 10 mm. of the immersion line or of any part of the scale.

The graduation lines shall be clearly etched, and of uniform thickness not exceeding 0.15 mm. The lines shall all be at right angles to the axis of the thermometer. When the thermometer is viewed from the front and in a vertical position the lines shall all finish on a line parallel to the axis on the left hand side. Certain of the graduation lines shall be extended on the right hand side but the shortest graduations shall not extend across the bore. When the diameter of the tube permits the figures shall be upright when the thermometer is viewed from the front and in a vertical position, and should preferably be placed so that they would be intersected by the line to which they refer if it were extended.

In addition to the special markings given in the table, each thermometer shall be marked with an identification number, and the maker's or

veador's name or trade mark :—

Name and special marking	..	"I. P. T. P. M. - Low"
Dimensions-stem, diameter	...	6-7 mm.
Bulb, shape	...	Round.
Bulb, length	...	.....
Bulb, diameter	...	8 mm. max.
Overall length ± 5 mm	...	275 mm.
Length of graduated portion	...	150-180 mm.
Distance, bottom of bulb to 20° mark ..		70-85 mm.
Range	...	20°F. to 230°F.
Graduation	...	1°F.
Longer lines at each	...	5°F. and 10°F.
Figured at each	...	10°F.
Expansion chamber	...	Required
Immersion	...	2.2 in.

Top finish ... Glass ring.

Each thermometer shall be mounted securely in a thermometer collar so that from the under-side of this collar to the bottom of the bulb the distance is 2.1 in. (± 0.05 in.) The thermometer collar shall have an outside diameter of 0.5 in., ± 0.002 in., and a flange 0.1 in., ± 0.01 in., in thickness. The cement used to fasten the thermometer into the collar shall be of such a nature that it will withstand the action of oil up to the highest temperature at which the thermometer is used.

DRYING OF THE SAMPLE.

If gas oil or fuel oil is being tested, the sample shall be dried by the following methods :—

One hundred grams of well-dried granular calcium chloride is placed in a dry wide mouth stoppered glass bottle.

Two hundred and fifty millilitres of the oil is then poured upon the calcium chloride. The stopper is secured in position by tying. The bottle is then well shaken and is stored in a vessel of water, the level of the water being upto about one third of the height of the oil in the bottle. The water is next raised to a temperature of 50°C . (120°F .) and is maintained at this temperature for a period of seven hours. The bottle and its contents being well shaken up at intervals of about an hour. At the end of this treatment the bottle and its contents are allowed to cool to atmospheric temperature; the bottle is then opened and sufficient of the oil for test filtered through paper on a Buchner funnel.

IV. (II) METHOD.

All parts of the cup and its accessories shall be thoroughly clean and dry before starting the test. Particular care should be taken to avoid the presence of any gasoline or naphtha used to clean the apparatus after a previous test.

The cup shall be filled with the oil to be tested upto the level indicated by the filling mark.

The lid shall be placed on the cup and the latter set in the stove. Care should be taken to have the locating devices properly engaged. The thermometer shall be inserted.

The test flame shall be lighted and adjusted so that it is of the size of a bead 0.16., in diameter.

Heat shall be supplied at such a rate that the temperature read on the thermometer increases not less than 9 or more than 11 degrees per minute. The stirrer shall be turned at the rate of approximately 60 revolutions per minute.

Applications of the test flame shall be made at each temperature reading which is a multiple of 20°F upto 220°F . For the temperature range above 220°F ., application shall be made at each temperature reading which is a multiple of 5°F . The first application of the test flame shall be made at a temperature at least 50°F ., below the actual flashing-point. Application of the test flame shall be made by operating the device controlling the shutter and test flame burner so that the flame is lowered in one half second, left in its lowered position for one second, and quickly raised to its high position. Stirring shall be discontinued during the application of the test flame.

The flashing point is taken as the temperature read on the thermometer at the time of the flame application that causes a distinct flash in the interior of the cup. The true flash must not be confused with the bluish halo that some-

time surrounds the test flame for the application preceding the one that causes the actual flash.

The barometric pressure shall be observed and recorded. No corrections shall be made except in case of dispute, when the flashing-point figure shall be corrected according to the following rule :—

For each inch (25.4mm) below 29.92 in., (760mm) barometric reading add 1.6°F to the flashing point.

For each inch (25.4 mm) above 29.92 in., (760 mm.) barometric reading subtract 1.6°F . from the flashing-point.

V. THE FLASHING-POINT.

If a flash takes place at any temperature below 76°F ., the temperature at which it occurs is noted. Two fresh portions of the sample are then to be successively tested in a similar manner and the results recorded. If no greater difference than two degrees Fahrenheit exists between any two of the three recorded results and if in no instance the flash has taken place within eight degrees Fahrenheit of the temperature at which the testing was commenced, the average of the three readings gives the flashing-point recorded by that particular instrument, but without either apparatus correction or thermometer correction. In the event of there being a greater differences than two degrees Fahrenheit between any two of the readings, or if the flash has occurred within 8 degrees of the temperature at which the testing was commenced, the series of tests is to be rejected and a fresh series of three similarly obtained.

If, however, a flash has occurred at or below 64°F ., when the test was applied in the manner above described, the next test shall be commenced 10°F ., lower than the temperature at which the flash had been previously obtained, and this procedure shall be continued until the results of three consecutive tests do not show a greater difference than two degrees Fahrenheit and until a flash has not occurred in any of the three tests within eight degrees Fahrenheit of the temperature at which the test was commenced. Provided always that if at the commencement of the series of tests a flash has occurred on the first application of the test flame at 66°F ., and if a flash has also occurred on the first application of the flame in each of the three successive tests in which the test flame is first applied at 66°F ., as above directed the testing officer shall certify that the petroleum has a flashing point below 67°F ., and the sample shall be reported as "dangerous petroleum".

If a temperature 76°F ., has been reached without a flash

occurring, the application of the test flame is to be continued at every degree rise of temperature until a temperature of 89°F., has been reached. If no flash occurs upto this point the test shall be continued on a fresh sample as in Section III (ii) (2) above.

If no flash occurs upto 120°F., the flashing-point shall be determined by the Pansky-Martens Apparatus and method as described above,

(Sd.) FERROZ DIN,

Revenue Secretary.

KASHMIR UNIVERSITY

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Date

HIS HIGHNESS' GOVERNMENT, JAMMU AND KASHMIR.

ORDER NO. 1006-C OF 1942.

RULES UNDER THE PETROLEUM ACT OF 1998.



JAMMU:

Printed at The Ranbir Government Press—25-9-99—301.

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HIS HIGHNESS' GOVERNMENT JAMMU AND KASHMIR

CHIEF SECRETARIAT.

(General Department)

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SUBJECT :—*Rules under the Petroleum Act of 1938 Memorandum No. C-432 dated 17th July 1942.*

COUNCIL ORDER No. 1006-C OF 1942.

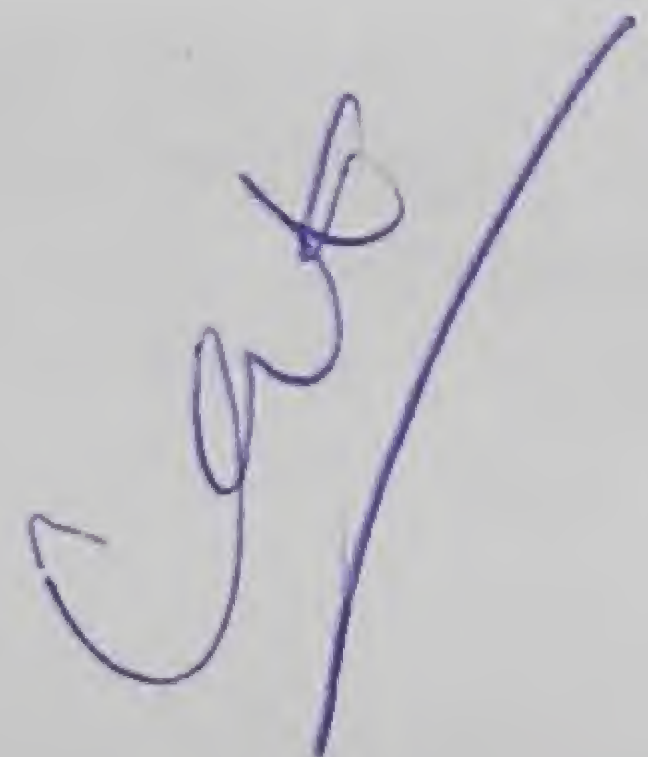
29th September 1942.

Sanction is accorded to the publication of the Rules and Notifications forming annexures to this order.

By order in Council,

(Sd.) N. GOPALASWAMI,

PRIME MINISTER.



NOTIFICATION.

No.—

In exercise of the powers conferred by sub-section (1) of section 14 of the Jammu and Kashmir Petroleum Act, 1998, Government are pleased to authorise the officers mentioned in the first column of the schedule attached hereto to enter any place in the areas specified in the second schedule hereto where petroleum is being imported, transported, stored, produced, refined, or blended and to inspect and take samples for testing of any petroleum found therein.

Officers.

Areas.

- | | | |
|---|---|--|
| <ol style="list-style-type: none"> 1. All District Magistrates. 2. All Sub-Divisional Magistrates 3. All Customs and Excise Officers
not below the rank of an
Assistant Inspector. | } | The respective areas
over which their
authority extends. |
|---|---|--|

(Sd.) FERROZ DIN,

Secretary to Government, Revenue Department.

NOTIFICATION.

No.—

In exercise of the powers conferred by sub-section (1) of section 13 of the Jammu and Kashmir Petroleum Act, 1998, Government are pleased to authorise the officers mentioned in the first column of the schedule attached hereto to enter any place in the areas specified in the second column of the schedule hereto where petroleum is being imported, stored, produced, refined or blended or is under transport and inspect all receptacles and appliances used in connection with

petroleum in order to ascertain if they are in accordance with the provisions of Chapter I of the said Act and the rules made thereunder.

Officers.

Areas.

- | | | |
|--|---|---|
| <ol style="list-style-type: none"> 1. All District Magistrates. 2. All Sub-Divisional Magistrates. 3. All Police Officers not below the rank of Inspector. 4. All Customs and Excise Officers not below the rank of Assistant Inspector. | } | <p>The respective areas over which their authority extends.</p> |
|--|---|---|

(Sd.) FERROZ DIN,

Secretary to Government Revenue Department.

NOTIFICATION.

No.—

In exercise of the powers conferred by section 17 of the Jammu and Kashmir Petroleum Act, 1998 Government are pleased to authorise the officer noted below to test petroleum of which samples have been taken under the said Act which have been submitted to him for test by any person, and to grant certificates of the result of such tests.

Officer.

-
1. Chemical Examiner His Highness' Government, Jammu and Kashmir.

(Sd.) FERROZ DIN,

Revenue Secretary.

NOTIFICATION.

In exercise of the powers conferred by section 31 of the Jammu and Kashmir Petroleum Act, 1998 (XIV of 1998) the Government are pleased to restrict the operation of the provisions of the Jammu and Kashmir State Municipal Act, 1998 in so far as the said Act relates to the storage of Petroleum which has its flashing point below 200° Fahrenheit to the following quantities, namely:—

1. In the case of dangerous petroleum not intended for sale. Not exceeding six gallons.

Provided that it is kept in securely stoppered receptacles of glass, stoneware or metal, not exceeding one quart in capacity in the case of receptacles of glass or stoneware and not exceeding five gallons in capacity, in the case of receptacles of metal.

- (II) in the case of non-dangerous petroleum, having its flashing point below 150° Fahrenheit. Not exceeding five hundred gallons.

Provided that it is contained in receptacles not exceeding two hundred gallons in capacity.

- (III) in the case of non-dangerous petroleum having its flashing point not below 150° Fahrenheit but below 200 Fahrenheit. Not exceeding ten thousand gallons.

Provided that it is not stored in the same installations or storage shed as other petroleum and it is exempt from licence under Chapter V of the Rules issued under the Petroleum Act, 1998.

(Sd.) FERROZ DIN,

Revenue Secretary

THE JAMMU AND KASHMIR PETROLEUM RULES 1998.

NOTIFICATION.

No.....dated.....194 .

In exercise of the powers conferred by section 4, sub-section (2) of section 14, sections 21 and 22 and sub-section (1) of section 29 of the Jammu and Kashmir Petroleum Act 1998 (XIV of 1998) the Government are pleased to make the following rules.

Rules.

CHAPTER I.

PRELIMINARY.

1. These rules may be called the Jammu and Kashmir Petroleum Rules, 1998.
Short title.
2. (1) All notifications and rules issued and all appointments made by the Government under the Petroleum Act, 1977 (Act No. XXXII of 1977) are hereby superseded, but
Supersession and savings.
(i) all licenses or duplicates granted or renewed and all fees imposed or levied shall be deemed to have been respectively granted, renewed, imposed or levied under these rules; and
(ii) all approval given and all powers conferred by or under any notification or rules so superseded shall so far as they are consistent with the Act and these rules, be deemed to have been given or conferred by or under these rules.
(2) Anything not in conformity with these rules which was permitted to be done by or under any rules in force immediately before the coming into force of these rules and which under these rules, may be permitted by the Licensing Authority to be done, shall be deemed to have been so permitted by the Licensing Authority unless the Licensing Authority after such notice of his intention as he considers reasonable, declares that it is not so permitted.
3. In these rules, unless there is anything repugnant in the subject or context :—
Definitions,
(a) "The Act" means the Jammu and Kashmir Petroleum Act, 1998.

(b) "Licensing Authority" means the Inspector General of Customs and Excise.

(c) "District Authority" means the District Magistrate.

(d) "Heavy Petroleum" means petroleum which has its flashing point not below 150° F.

(e) "Inspector" means an officer authorised by the Government under sub-section (1) of section 13 of the Act ;

(f) "Installation" means any premises within which any place has been specially prepared for the storage of petroleum in bulk, but does not include a well-head tank ;

(g) "Petroleum in bulk" means petroleum contained in a receptacle exceeding two hundred gallons in capacity ;

(h) "Protected works" includes—

(a) buildings in which persons dwell or assemble, timber yards and buildings or places where petroleum is stored and

(b) any public road or other place which the Inspector General of Custom and Excise has by written order declared to be a protected work, but does not include any building or place which forms part of an installation ;

(i) "Sampling Officer" means an officer authorized by the Government under sub-section (1) of section 14 of the Act ;

(j) "Storage Shed" means a building used for the storage of petroleum otherwise than in bulk, whether it forms or does not form part of an installation, but does not include a building used for the storage of petroleum exempt from licence under sections 7, 8 or 9 of the Act ;

(k) "Testing Officer" means an officer authorized by the Government to test petroleum under section 17 of the Act ; and

(l) "well-tank head" means a tank into which crude petroleum flowing or being pumped from a well is first discharged.

4. Nothing in these rules, except Chapter IX, applies to petroleum which has its flashing point not below 200° F.

CHAPTER II.

IMPORTATION OF PETROLEUM.

5. Save as provided in sections 8, 9, and 10 of the Act, License for import of dangerous petroleum shall not be imported except under a license granted under these rules.

6 Nothing in this Chapter applies to—

(a) dangerous petroleum not exceeding 6 gallons in quantity which is not intended for sale;

(b) dangerous petroleum contained in any fuel tank incorporated in a motor conveyance.

(2) Nothing in rules 5 and 7 shall apply to petroleum imported by the Jammu and Kashmir State Forces.

7. (1) Every person desiring to import petroleum shall furnish personally or through his agent to the Officer-In-charge of the Customs Post through which the import is to be made, a certificate of storage accommodation in Form 'A' signed by the said persons or his agent;

Importer to furnish certificate of storage accommodation,
 Provided that, where the importer intends to import both dangerous and non-dangerous petroleum, separate form shall be furnished for dangerous and non-dangerous petroleum.

Provided further that this sub-rule shall not apply where the quantity of non-dangerous petroleum to be imported by any one consignee does not exceed 500 gallons, or where the quantity of dangerous petroleum to be so imported does not exceed 60 gallons.

(2) Every person desiring to import dangerous petroleum shall produce, personally or through his agent before the Officer-In-charge of the Customs post of import, his license for the import and storage of such petroleum.

8. (1) No imported petroleum shall be unloaded except with the permission of the Officer-In-charge of the Customs post of import.

(2) If the Officer-In-charge of the Customs post after receiving—

(a) the Testing Officer's report on any petroleum.

(b) the certificate, required by sub-rule one of rule 7 and

(c) the license required by sub rule (2) of rule 7, and after making such further enquiries as he deems necessary, is satisfied that the petroleum can lawfully be imported and that there is suitable accommodation for it, he shall permit it to be un-loaded.

(3) Nothing in this rule shall affect the power of the officer-In-Charge of the Customs post to detain the petroleum under any other law or rule for the time being in force.

9 (1) Petroleum imported otherwise than in bulk shall be unloaded at the yards provided for the purpose.

Unloading of petroleum imported otherwise than in bulk.

(2) No petroleum contained in cask, drums or other receptacles shall be unloaded unless such receptacles are free from leakage and of such strength and construction as not to be liable to be broken or to leak except in case of gross carelessness or extraordinary accident.

Provided that petroleum contained in casks, drums or other receptacles which do not satisfy the requirements of this sub-rule may, subject to such conditions as the Officer-In-Charge of the Customs post may impose, be unloaded at a separate place approved for the purpose.

10. Nothing in rules 7 to 9 inclusive applies to heavy petroleum.

CHAPTER III

Transport of petroleum.

PART I GENERAL.

11. All due precautions shall be taken at all times to prevent accident by fire or explosion.

Prevention of
accidents,

12. All due precautions shall be taken at all times to prevent any escape of petroleum during transport especially into any drain, sewer, river or water course.

Prevention of escape of
petroleum.

13. All empty tanks or other receptacles which have contained dangerous petroleum or which have contained non-dangerous petroleum in bulk shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum vapour.

Empty receptacles.

14. (1) Dangerous petroleum, if not in bulk, shall be contained in gas-tight tinned, galvanized or otherwise externally rust proofed sheet iron or steel receptacles which shall be fitted with well-made fitting apertures and well-fitting screw plug, or with screw caps or other caps with metal airtight under-caps. The receptacles shall be kept in proper repair.^t

Receptacles for
dangerous petroleum.

(2) No receptacles, other than tanks or tank-carts of a type approved in writing by the Inspector General of Police shall be of more than 65 gallons capacity excluding the airspace prescribed by sub-rule (7)

(3) The receptacles other than tanks or tank carts, shall be of a type approved in writing by the Licensing Authority and shall have the following thickness of metal.

Not less than

Capacity exclusive of the prescribed
air-space not exceeding 2 gallons ... 27 B. G.
Exceeding 2 gallons but not exceeding

		4 gallons	...	22	"
"	4	" 30 "	...	18	"
"	30	" 45 "	...	17	"
"	45	"	...	16	"

(4) Where the approval of the Licensing Authority is sought to a type of receptacles not previously approved, three copies of a detailed drawing thereof to scale shall be forwarded to him.

(5) The receptacles shall be so constructed and secured as not to be liable, except under circumstances of gross negligence or extraordinary accident to become defective, leaky or insecure in transit.

(6) The receptacles shall bear a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Petrol" or "Motor" spirit or an equivalent warning of the dangerous nature of the petroleum.

(7) An air space of not less than $7\frac{1}{2}$ per cent. of its capacity shall be left in each tank, drum, or other receptacle containing dangerous petroleum.

(8) Nothing in sub-rules (1), (2), (3), (4) and (6) shall apply to receptacles in the possession of the Jammu and Kashmir State Forces.

15. Non-dangerous petroleum, if not in bulk, shall be packed in air-tight tins or drums of steel or iron or in other receptacles not easily broken or in tanks permanently fixed to cart-wagons, boats or other means of carriage, and of type approved by the Inspector General of Police.

16. (1) No person shall deliver any petroleum to any one in the State other than the holder of a storage licence or his authorized agent or railway administration.

Receptacles for non-
dangerous petroleum.

Restriction on delivery
and despatch of petrol-
eum.

(2) No person shall despatch any petroleum to any one in the State other than the holder of a storage license.

(3) Notwithstanding anything contained in sub rule (2) non-dangerous petroleum not exceeding 3,000 gallons in quantity packed in sealed air-tight tins or drums of steel or iron may be despatched to a person not holding a storage license, provided that the person despatching the petroleum has satisfied himself that prior arrangements have been made by the person to whom the petroleum is despatched for the immediate disposal in the original packages of any quantity in excess of 500 gallons.

(4) This rule shall not apply to the delivery or despatch of petroleum in quantities which are permitted by the Act or these rules to be stored without license or to any petroleum in the possession of the Jammu and Kashmir State Forces

PART II.

TRANSPORT ON LAND BY VEHICLES.

17. (1) No fire or other artificial light capable of igniting inflammable vapour shall be allowed on any vehicle containing petroleum in bulk.

(2) No person shall smoke while on or attending such a vehicle.

(3) No article or substance capable of causing fire or explosion shall be carried on such a vehicle.

Explanation.—For the purposes of this rule any tank or other receptacle which has contained petroleum and which has not been thoroughly cleaned and freed from inflammable vapour shall be deemed to contain petroleum.

18. (1) Tank-wagons, lorries or carts transporting petroleum shall only be filled or discharged by means of metal pipes or armoured hose in which the armouring is electrically continuous throughout.

(2) Tanks, other than fuel tanks on vehicles, containing dangerous petroleum shall not be filled or discharged :—

(i) within 100 feet of any fire furnace or artificial light capable of igniting inflammable vapour, or

(ii) at any place where the lorry, wagon or cart is exposed to sparks ;

Provided that the distance specified in clause (i) may be

reduced to 30 feet when the petroleum is filled or discharged under seal and closed vapour return pipe lines are provided :

Provided further that the distance specified in clause (i) may be reduced to the figure prescribed in the license in Form K where the petroleum is filled, stored and discharged into a tank in any premises licensed in that Form.

Explanation —A pipe supplying liquid to a tank is "under seal" to that tank if it is screwed to the tank or otherwise attached so that no liquid or vapour can escape into the air except through an approved vent.

19. An adequate supply of sand or other efficient means of extinguishing fire shall be carried in an easily accessible position on every vehicle transporting petroleum in bulk by road.

Means of extinguishing fire to be carried.

20. Petroleum shall not be transported on any public vehicle which is carrying passengers.

Prohibition as to public service vehicles

21. (1) Every vehicle while engaged in the transport of petroleum by road shall be constantly attended by at least one person :

Vehicles to be constantly attended.

Provided that such vehicles may be left unattended in places previously approved by the Inspector General of Police.

(2) Every vehicle on which more than 1,000 gallon of petroleum is being transported by road, or which, while transporting any petroleum by road is being trailed by another vehicle, shall so long as it is in motion be attended by at least two persons.

22. (1) A trailer not exclusively used for transporting petroleum shall not be attached to any vehicle transporting petroleum by road.

Trailers attached to vehicles transporting petroleum by road.

(2) A trailer transporting petroleum shall not be attached to any vehicle other than a vehicle used for transporting petroleum and not more than one trailer shall be so attached.

(3) A trailer shall have two axles.

(4) When a trailer is attached to a vehicle, the total quantity of petroleum transported on the trailer and the vehicle combined shall not exceed 2,000 gallons.

(5) If a trailer transporting dangerous petroleum is attached to a vehicle transporting non-dangerous petroleum the vehicle shall comply with all the provisions of these rules relating to vehicles transporting dangerous petroleum.

(6) A trailer other than a tank trailer shall not be

attached to a tank wagon. The capacity of a tank trailer shall not exceed 500 gallons, and no trailer shall be attached to a tank-wagon of greater capacity than 1,500 gallons.

(7) No trailer attached to a tank-wagon shall be employed within any thickly populated area without the permission in writing of the District Authority.

23. In these rules the tank forming part of a tank wagon or tank trailer shall be deemed to include any number of tanks on the same chassis and any limitation herein prescribed on the capacity of a tank shall be construed so as to permit of the tank containing the amount specified under varying degrees of temperature

24. If electric lighting is employed on any vehicle including a trailer, used in the transport of petroleum other than heavy petroleum by road, the following conditions shall be complied with:—

(i) the pressure shall not exceed sixteen volts ;
 (ii) the circuit shall be heavily insulated and shall be independent of the chassis, and the wiring shall be so fixed and protected as to reduce as far as possible the risk of damage ;

(iii) the generator, battery, switches and fuses shall be carried in front of the fire-resisting screen and the battery shall be in an easily accessible position ; and

(iv) means of cutting off the current close to the battery by a double pole switch or other suitable method shall be provided.

25. (1) No motor conveyance other than aircraft shall fill or replenish its fuel tanks with petroleum other than heavy petroleum directly from vehicles carrying petroleum in bulk.

(2) Aircraft may receive fuel by means of specially constructed tank lorries or wagons only if these are of a type approved by the Inspector General of Police for this purpose.

(3) During the fuelling of aircraft used for the conveyance of passengers no passengers shall be allowed to remain in the machine.

(4) No person shall be allowed to smoke within 100 feet of any aircraft while it is being or is about to be-fuelled.

(5) All aircraft engines within the distance specified in sub-rule (4) shall be stopped so long as fuelling is in progress.

(6) Nothing in sub-rules (2) and (5) shall apply to military aircraft fuelling on military aerodromes.

Owner responsible for observance of rules.

26. The owner of a vehicle used for the transport of petroleum who employs any person in connection with such transport, shall be responsible that all necessary measures have been taken to ensure that such person is acquainted with and carries out the provisions of these rules.

27. During the filling, discharging or emptying of any tank wagon or trailer transporting petroleum in bulk other than heavy petroleum the following precautions shall be observed.

(i) if the vehicle is mechanically-driven the engine shall be stopped so long as the filling, discharging or emptying is in progress and shall not be restarted until all tanks and valves have been securely closed ;

Provided that this condition may be dispensed with in the case of vehicles approved under sub-rule (2) of rule 25 which are supplying aircraft,

(ii) Adequate provision shall be made to prevent the accumulation of a dangerous static charge of electricity.

(iii) if the wagon is drawn by an animal or animals they shall be removed from the wagon and the wheels securely scotched before the filling, discharging or emptying of any dangerous petroleum is begun, and

(iv) the vehicle shall be constantly attended by a competent person.

28. Petroleum in cans or other receptacles shall not be transported by road on any tank-wagon used for the transport of petroleum unless wagon is so constructed as to comply with the conditions applicable to transport on wagons other than tank wagons as well as with the conditions applicable to transport on tank wagons.

29. Except during the operations of filling or emptying a tank wagon the filling and dipping pipes shall be kept securely closed. Where the filling pipes are not provided with a liquid seal, the covers shall be kept locked or properly sealed except during the operation of filling a tank-wagon, and the keys shall not be carried on the wagon.

30. Except where approved electric lighting as specified in rule 59 is exclusively used, the filling, discharging and emptying of tank-wagons shall be performed between the hours of sunrise and sunset.

31. (1) petroleum in bulk shall not be transported by land except in a vehicle of a type approved in writing by the Inspector General of police.

Precautions to be observed during filling or emptying tank wagons.
Approval of vehicles for transport in bulk necessary.

(2) All such vehicles other than those exclusively used for the transport of heavy petroleum shall have a stamped embossed, painted or printed warning exhibiting in conspicuous characters the words "Petrol", "Motor Spirit" Kerosene or an equivalent warning of the nature of the contents.

(3) Every such vehicle and its fittings shall be maintained in good condition.

32. (1) Every vehicle on which petroleum not in bulk is transported shall be strongly constructed and with sides and back of adequate height and shall be maintained in good condition.

Vehicles for transport other than in bulk

(2) In the case of animal-drawn vehicle the requirement in sub-rule (1) regarding the sides and back of the vehicle shall not apply if the load is securely fastened to the vehicle.

(3) All receptacles shall be so packed as not to project beyond the sides or back of the vehicle.

33 (1) In every mechanically driven vehicle used for the transport by road of petroleum other than non-dangerous petroleum not in bulk or heavy petroleum.

Engines of mechanically driven vehicle

(a) the engine shall be of an internal combustion type ;

(b) the engine fuel tank and electric batteries shall be effectively screened from the body of the vehicle by a fire-resisting shield carried up above the height of the load and down to within twelve inches of the ground.

(c) the exhaust shall be wholly in front of the fire-resisting shield.

(2) If windows are provided in the fire-resisting shield they shall be fitted with wired glass.

(3) The fuel tank of every such vehicle other than an articulated vehicle may be behind the fire-resisting shield if :

(a) a fuel feed apparatus, placed in front of the shield, is used to lift the contents from the fuel tank, and

(b) the fuel tank is protected from blows by the frame or by stout steel guards, and the filling hole cover is provided with a lock.

(4) The fuel tank of any vehicle may be behind the fire-resisting shield if the fuel used in the engine is heavy petroleum.

(5) A quick action cut-off valve shall be fitted to the fuel feed pipe of every such vehicle in an easily accessible position, which shall be clearly marked.

34. Without prejudice to the operation of any other provision of law for the time being in force whereby a lower limit of speed is imposed, the speed of a motor tank wagon, or a

Speed limit for vehicles.

motor lorry transporting petroleum in receptacles shall not exceed 30 miles per hour if fitted with pneumatic tyres and 15 miles per hour if fitted with solid tyres.

35. (1) If the Inspector General of police is satisfied that in respect of any class of vehicle any of the requirements of rules 22, 32 and 33 may be safely suspended or relaxed he may authorise such suspension or relaxation for such period and under such conditions as he may think fit.

Exemptions.

(2) Nothing in rules 22, 24, 31, 32 and 33 shall apply to vehicles and trailers in the possession of the Jammu and Kashmir State forces.

36. (1) Rules 17 to 34 shall not apply to the conveyances of petroleum in any motor vehicle for use only in the propulsion of such vehicles.

Special provisions for motor conveyances.

(2) No motor conveyance carrying passengers on hire shall carry any petroleum other than :—

(i) petroleum in the fuel tank incorporated in the conveyance and.

(ii) petroleum not exceeding 20 gallons in quantity intended to be used to generate motive power for the conveyance and kept in the manner provided in sub-section (2) of section 8 of the Act.

(3) During the filling or replenishment of the fuel tank of a vehicle licensed for the conveyance of more than six passengers on hire, the driver or other person in charge of the vehicle shall not allow any passenger to remain in the vehicle.

(4) All petroleum tins carried in a vehicle carrying passengers for hire shall be securely closed and shall be carried in a specially prepared receptacle which is not accessible to passengers in the vehicle, and is not on the roof.

PART III.

TRANSPORT BY PIPE LINES.

37. The rules in this part apply only to the transport of petroleum by means of pipe lines other than those in any area in which operations for the winning of natural petroleum or natural gas or both are carried on or within the limits of refineries and installations.

Application.

38. An approved casing shall be put over the pipe line where it passes under any railway or public road and an approved protective casing shall be constructed round the pipe where it crosses over any railway or protected work.

Provided that the Inspector General of Customs and Excise, may waive this rule in the case of any specified road or roads, if he is satisfied that the safety of the public is not likely to be endangered thereby.

(2) The Inspector General of Customs and Excise may require an extra casing to be put over the pipe line where it crosses any stream, road, railway or protected work.

39. The whole of every pipe line shall be efficiently patrolled.

40. As a precaution against excessive pressure in the pipe line an automatic by-pass relief valve and a reliable pressure gauge shall be placed on the common discharge pipe at pumping stations.

41. A telephone or telegraph line shall be provided with connections at frequent interval along the pipe line. One telephone or telegraph line shall suffice for a series of parallel pipe lines ;

Provided that this rule shall not apply to a pipe line connecting railway sidings with installations if the length of such pipe line does not exceed one mile.

42. Gate valves shall be provided at reasonable intervals.

43. Tank gauges shall be checked between stations at frequent intervals.

CHAPTER IV.

STORAGE OF PETROLEUM REQUIRING LICENSE.

44. Save as provided in section 7, 8 and 9 of the Act and by rule 63 no one shall store any petroleum except under a license granted under these rules ; Provided that no license shall be necessary for storage in a well-head tank.

45. (1) No person shall smoke in any installation or storage shed.
Precautions against fire

(2) No person shall carry matches, fuses or other appliance for producing ignition or explosion in any installation or storage shed which is used for the storage of dangerous petroleum.

(3) No fire, furnace or other source of heat or light capable of igniting inflammable vapour shall be allowed in any licensed installation or storage shed save in places specially authorised by the Licensing Authority for the purpose.

(4) An adequate supply of dry sand or earth together with the necessary implements for its convenient application, or other efficient means of extinguishing petroleum fires, shall always be kept in every installation and in or adjacent to every storage shed.

46. All operations within an installation or storage shed shall be conducted under the supervision of an experienced responsible agent or supervisor.
Supervision of operations within an installation in storage shed.

47. The ground in the interior of an installation, and the protected area surrounding any storage shed or installation, shall be kept clean and free from all inflammable material waste vegetation and rubbish.
Cleanliness of installation and storage shed.

EXPLANATION.—In this rule “protected area” means the area necessary for the maintenance of the distances required under the conditions of the license to be kept clear between any installation or storage shed and any protected work.

48. (1) All enclosures surrounding tanks or buildings belonging to an installation or storage shed shall be kept drained and no water shall be allowed to accumulate in the enclosure.
Drainage.

(2) Where drainage is effected by means of a pipe the pipe shall be fitted with a valve actuated from the outside of the enclosure.

Provided that this sub-rule shall not apply to storage sheds which are not required under these rules or the terms of the license to be provided with an enclosure wall or embankment.

(3) All valves and other openings for draining off water shall be kept closed except when water is being drained off.

(4) The nature of the drainage arrangements shall be shown in the plan submitted with the application for a licence.

49. (1) Every installation shall be surrounded by a wall
Exclusion of unauthori- or fence of at least six feet in height.
 sed persons.

Provided that nothing in this sub-rule shall apply to an installation licensed under the rules in force immediately before these rules come into operation unless its fencing is considered by the Licensing Authority to be unsatisfactory.

(2) Precautions shall be taken to prevent un-authorised persons from having access to any storage shed or installation.

50. No person under the age of 15 years shall be em-
Children. ployed in or allowed to enter any premises licensed under these rules.

51. The provisions of rules 13, 14 and 15 shall apply to
Receptacles for pet- petroleum stored under license.
 roleum.

52. No installation or storage shed shall without per-
Petroleum only to be mission in writing from the Inspector
 stored. General of Customs and Excise be used for any purpose other than the storage and distribution of petroleum and purposes directly connected therewith.

53. The capacity in gallons of every tank in an installa-
Marking of capacity of tanks. tion shall be conspicuously marked on the tank.

54. (1) Every tank or other receptacle used for the
Construction of tanks, storage of petroleum in bulk other than well-head tank shall be constructed of iron or steel properly erected and designed according to sound engineering practice, and, together with all pipes and fittings, shall be so constructed and maintained as to prevent any leakage of petroleum.

(2) The height of a storage tank shall not exceed its diameters.

Provided that, in the case of tanks of less than 30,000 gallons capacity, the height may extend to one and half times the diameter.

(3) No tank shall be more than 50 feet in height.

55. (1) Storage tanks or other receptacles for the storage
Testing of Tanks. of petroleum in bulk other than well-head tanks, after being placed in a final position and before being brought into use, shall, unless they were in use before the publication of these rules, be tested by water pressure by the licensee in the presence of an Engineer accepted as qualified for the purpose by the Licensing Authority.

(2) The water used for testing shall be free from petroleum and shall not be passed through any pipes or pumps

ordinarily used for the conveyance of petroleum.

Provided that, where the Licensing Authority is satisfied that it is not reasonably possible to convey water by pipes or pumps other than these ordinarily used for the conveyance of petroleum, he may permit the use of a petroleum-pipe or pump for the conveyance of water subject to such conditions as he may impose.

(3) The test referred to in sub-rule (i) shall also be made before any receptacles for the storage of petroleum in bulk are brought into use after being repaired.

56. All tanks or other receptacles for the storage of petroleum in bulk, other than well-head tanks or tanks or receptacles of less than 10,000 gallons capacity containing heavy petroleum shall be electrically connected with the earth in an efficient manner by means of not less than two separate and distinct connections placed at opposite extremities of such tank or receptacle. The roof and all metal connections of such tank or receptacle shall be in efficient electrical contact with the body of such tank or receptacle.

57. The connections and contacts required by rule 56 shall be inspected and tested at least once in every year by the licensee of the tank or receptacle in the manner prescribed by the Licensing Authority.

(2) A record of such inspections and tests shall be maintained by such licensee, and shall be produced on demand by any Inspector.

58. No installation or storage shed shall be open, and no work in any installation or storage shed shall be permitted, between sunset and sunrise except where approved electric lighting as specified in rule 59 is exclusively used.

59. (i) All electric wires installed at less than 15 feet from the ground in any petroleum installation or situated within 20 feet of any building or tank containing dangerous petroleum shall consist of insulated cables, enclosed in metallic coverings which shall be gas tight electrically and mechanically continuous throughout and effectively earthed outside the building.

(2) No electric wire shall pass over any petroleum tank, filling, painting or storage shed.

(3) In filling, painting and storage sheds and pump rooms used for

(i) dangerous petroleum:—

- (a) all electric meters, distribution boards, switches, fuses, plugs and sockets shall be placed outside the building and shall be of flam-proof construction satisfying the requirements of the British Standard Specification No. 229 and the frames shall be effectively earthed;
- (b) all electric fixed lamps shall be enclosed in a well glass flame-proof fitting, either doubly enclosed with an inner and an outer well glass or singly enclosed with substantial metal protection, such lamps shall be installed at 12 feet where possible, but in no case less than 8 feet, above the floor level;
- (c) all electric portable hand lamps of the self-contained pattern shall be of a type approved by the Licensing Authority.
- (d) for the examination of cans and other containers, electric torches employing a separate battery may be used, these torches shall be fitted with substantially protected flame-proof globes and shall be supplied through a cable of cab-tyre or other suitable sheathing and properly constructed flame-proof connectors, and
- (e) no single fixed lamp shall exceed 150 watts.

(ii) non-dangerous petroleum;

- (a) all electric meters, distribution boards switches, fuses, plugs, and sockets shall be enclosed in ironclad, gas-tight cases and shall be fixed at least 5 feet above the floor level in well-ventilated positions close to the door.
- (b) all electric fixed lamps shall be enclosed in a gas-tight well glass fitting provided with substantial metal protection;
- (c) all electric portable hand lamps shall be fitted with substantially protected gas-tight globes and supplied through a flexible cab-tyre or other suitable sheathing and properly constructed gas-tight connectors, and
- (d) no single fixed lamp shall exceed 200 watts and no hand lamp shall exceed 30 watts.

60. No internal combustion engine or electric motor shall be used for driving pumps for pumping petroleum in a pump house specially

constructed for the purpose and under such conditions as may be approved by the Licensing Authority ;

Provided that this rule shall not apply where the motor control switchgear and starting apparatus are of flame-proof construction satisfying the requirements of the British Standard specification No. 229.

61. Copies of the preceding rules in this Chapter and of the conditions of the license shall be exhibited in a conspicuous place in every licensed installation and storage shed.

62. Nothing in rules 44, 49, 52, 55 and 58 shall apply to petroleum in the possession of the Jammu and Kashmir State Forces.

CHAPTER V.

STORAGE OF PETROLEUM NOT REQUIRING LICENSE.

63. (1) Notwithstanding anything contained in these rules, it shall be permissible to store, without license, subject to the conditions of this Chapter, heavy petroleum in quantities not exceeding 10,000 gallons, which is not stored in the same installation or storage shed as other petroleum.

(2) The provisions of Chapter IV shall not apply to petroleum so permitted to be stored without license under sub-rule (1).

64. (1) Heavy petroleum in bulk, if stored otherwise than under a license, shall be stored in a tank constructed of iron or steel properly erected and designed and the tank with all pipes and fittings shall be so constructed and maintained as to prevent any leakage of petroleum.

(2) All tanks of a capacity exceeding 1,000 gallons shall be surrounded by a bank or wall, or sunk in a pit, so constructed and maintained as to be able to contain without leakage the whole of the petroleum liable to be present at any one time in the tank.

(3) A distance of not less than ten feet shall be kept clear between protected works and the enclosures walls or banks.

(4) Nothing in this rule shall apply to petroleum in the possession of the Jammu and Kashmir State Forces.

65. Heavy petroleum which is not in bulk, if stored otherwise than under a license, shall if the quantity exceeds 500 gallons, be stored in

storage shed of which either—

(a) the doorways and other openings shall be built up to a height of one foot above the level of the floor, or

(b) the floor shall be sunk to a depth of one foot.

66. Every person intending to store heavy petroleum in quantity exceeding 1,000 gallons otherwise than under a licence shall send to the Inspector General of Customs and Excise a prior report stating the situation of the premises on which such petroleum is to be stored.

Prior report of storage of exempted heavy petroleum.

67. (1) Every garage or hangar used for housing any motor conveyance containing dangerous petroleum in bulk in any tank incorporated in the conveyance, whether such petroleum is intended to be used to generate motive power for the conveyance or not, shall be constructed of inflammable material and be effectively and safely ventilated to the open air.

(2) Every such garage or hangar shall be in charge of a competent person who shall be responsible for taking all proper precautions against fire and shall prevent unauthorised persons from having access to the building.

CHAPTER VI.

LICENCES.

68. (1) A person wishing to obtain or to renew a licence prescribed under these rules shall submit an application in writing to the authority empowered to grant such a licence.

Application for licence.

(2) Every application for the grant or renewal of a license to store or to import and store petroleum shall be in Form B.

69. (1) Licences for importation and storage may be granted by the Inspector General of Customs and Excise in the forms for the purposes and on payment of the fees specified in Schedule I,

Grant of licence

(2) A license in Form H may be granted for such period as the Licensing Authority may deem necessary subject to a maximum of 12 months. Every other licence granted or renewed under the rules shall remain in force until the last day of Chet of the year for which the license is granted or renewed.

(3) an applicant for a new licence may apply to the District Authority for a certificate to the effect that there is no objection to the applicant receiving a licence for the site proposed and the District Authority shall, if he sees no objection, grant such certificate to the applicant who may forward it to the

Licensing Authority with his application in Form B.

(4) The Licensing Authority may refer an application not accompanied by a certificate granted under sub-rule (3) to the District Authority for the observations.

(5) If the District Authority, either on a reference being made to him or otherwise, intimates to the Licensing Authority that any license which has been applied for should not in his opinion, be granted, such licence shall not be issued without the sanction of the Government.

(6) No licence in Form H shall be granted except to a person holding a license in Form I.

(7) In the case of a licence granted for storage one copy of the plan or plans of the storage premises signed in token of approval by the Licensing Authority shall be attached to the licence and one copy shall be filed for record in the office of the Licensing Authority.

70. Every licence granted under these rules shall be held subject to the conditions endorsed on it and shall contain all the particulars which are contained in the form prescribed for it by these rules

Particulars of license
 71. Notwithstanding anything contained in rule 70 the Licensing Authority, at the time of issuing a license may omit, alter or add to any of the conditions specified in the prescribed form of license.

Power of licensing authority to alter conditions

72. (1) Any license granted under these rules may be amended by the authority granting such a licence ;

amendment of lincese

Provided that the amendments shall not be inconsistent with any rule in this Chapter.

(2) A licensee who desires to have his license amended shall submit it to the Licensing Authority with an application stating the nature of the amendment and the reasons there for.

(3) The fee for the amendment of a license shall be one rupee plus the amount (if any) by which the fee that would have been payable if the license had originally been issued in the amended form exceeds the fee originally paid for the license,

73. (1) A license may be renewed by the authority empowered to grant such a license.

Renewal of license

(2) Every application for the renewal of a licence shall be made not less than thirty days before the date on which the license expires, and if the application is so made, the premises shall be held to be duly licensed until such

date as the Licensing Authority renews the license or until an intimation that the renewal of the license is refused has been communicated to the applicant.

(3) The same fee shall be charged for the renewal of a license as for a license.

74. (1) The Licensing Authority refusing to grant, amend or renew a license, shall record his reasons for such refusal in writing.

Refusal of license

(2) A copy of the order containing the reasons for such refusal shall be given to the applicant on payment of a fee of one rupee.

75. (1) Every license granted under these rules shall be liable to be cancelled by order of the Licensing Authority for any contravention of the Act or of any rule thereunder, or of any condition contained in such license,

Cancellation of license

(2) The Licensing Authority cancelling a license shall record his reasons for so doing in writing.

(3) A copy of the order containing the reasons for the cancellation of a license shall be given to the holder of the license on payment of a fee of one rupee.

76. (1) Any person may appeal to the Government from an order of the Licensing Authority refusing to grant, amend or renew a license or cancelling a license.

Appeal.

(2) Every appeal shall be in writing and shall be accompanied by a copy of the order against which the appeal is made.

(3) The appeal shall be presented within 60 days when the order appealed against has been passed by the Licensing Authority.

77. With every license granted for the storage of petroleum a copy of rules 44 to 61 in Chapter IV shall be given free of charge to the licensee.

Supply of rules.

78. (i) Before petroleum is stored in any installation for which a license is being granted for the first time, a certificate shall be furnished to the Licensing Authority to the effect that all enclosure walls and embankments constructed in accordance with the conditions of the license are of such a nature as to ensure safety.

Certificate of safety.

(ii) The certificate shall be signed by an Engineer, accepted as qualified for the purpose by the Licensing Authority.

(iii) When the license is not granted for the first time, but is being granted for an increased quantity of petroleum, a certificate shall similarly be furnished to the Licensing Authority before any quantity of petroleum exceeding the amount which was admissible under the former license is stored in the installation.

79. (1) The holder of a license for the storage of petroleum may, at any time before the expiry of the license, apply for permission to transfer his license to another person.

Transfer of license for storage.

(2) Such application shall be made to the Licensing Authority who shall, if he approves, of the transfer enter upon the license, under his signature, an endorsement to the effect that the license has been transferred to the person named.

(3) A fee of one rupee shall be charged on each such application.

(4) The person to whom the license is so transferred shall enjoy the same powers and be subject to the same obligations under the license as the original holder.

80 (1) If a licensee dies or becomes insolvent or mentally incapable or otherwise disabled, the person carrying on the business of such licensee shall not be liable to any penalty or confiscation under the Act or these rules for exercising the powers granted to the licensee by the license during such time as may reasonably be required to allow him to make an application for a new license in his own name for the unexpired portion of the original license.

Procedure on death or disability of licensee

(2) A fee of one rupee shall be charged for a new license for the unexpired portion of an original license granted to any person applying for it under this rule.

81. Where a license granted under these rules is lost or accidentally destroyed, a duplicate may be granted on payment of a fee of one rupee.

Loss of license

82. (1) Every application for the grant or renewal of a license shall be accompanied by the fee payable thereon. If the license is not granted or renewed, the fee shall be refunded.

83. The Government may, by general or special order grant exemption from, or reduction of any fee payable under these rules.

Power to exempt from payment of fees,

84. (1) Every person holding or acting under a license granted under these rules shall produce it, or an authenticated copy of it, at the place to which the license applies, when called upon to do so by any Inspector.

(2) Copies of any license may, for the purposes of this rule, be authenticated free of charge by the authority which granted the license.

85. The District Authority shall inform the Licensing Authority of the action taken by him on any report of infringements of the Act or of these rules which the Licensing Authority may make to him.

CHAPTER VII.

TETRA ETHYL LEAD MIXTURE.

86. Tetra ethyl lead shall not be added to petroleum in such quantity as to render the proportion of tetra ethyl lead to petroleum in excess of one part in 1,000 parts by volume or one part in 450 parts of weight.

87. No person shall import, transport or store any petroleum containing tetra ethyl lead in which the proportion of tetra ethyl lead exceeds one part in 1,000 parts by volume or one part in 450 parts by weight.

88. The Licensing Authority may by an order in writing in special cases permit the proportion of Tetra ethyl lead prescribed in rules 86 and 87 to be increased.

89. Every mixture of petroleum tetra ethyl lead shall be distinctively coloured before being sold to the public.

90. All receptacles containing a mixture of petroleum and tetra ethyl lead shall unless they are in the possession of Jammu and Kashmir State Forces bear a warning in the following terms.

“Warning
This spirit contains lead and should be used as a motor fuel only”.

CHAPTER VIII.

TESTING OF PETROLEUM.

91. (1) In all cases the Sampling Officer shall personally superintend the drawing of the sample. Where the sample is drawn from an original unopened receptacle containing petroleum not in bulk the opening shall be sufficient to admit of the sample being rapidly transferred from the receptacle.

Drawing of samples.

(2) Two bottles, each of the capacity of about 40 fluid ounces, shall be filled to three-quarters of their capacity with the sample and corked. The cork shall be driven home and cut off level with the neck and melted sealing wax shall be worked into the cork and the bottles shall be efficiently sealed.

92. One of the bottles referred to in sub-rule (2) of rule 91 shall be preserved for reference in case of need and the other shall be forwarded to the testing officer.

Forwarding and retention of bottles,

93. (1) When the licensee or his agent has on import of a consignment of petroleum sought permission to unload the same under rules 7 and 8, the Sampling Officer shall obtain samples of all the petroleum which it is intended to unload at the depot ;

Procedure of delivery of samples.

Provided that no sample need be taken of
(a) petroleum which is declared to be dangerous, or
(b) petroleum which is covered by a certificate on the prescribed form granted by a Testing Officer appointed by the Government of India, under the Indian Petroleum Rules 1937.

(2) The licensee shall deliver to the Sampling Officer without charge, samples of every variety of petroleum comprised in the petroleum of which samples are to be taken under sub-rule (1) such samples shall, if the Sampling Officer so requires, be taken from the particular receptacles indicated by him ;

Provided that when the petroleum is in cases, sample may be taken as unloading proceeds.

94. The minimum number of samples to be selected of each brand or quality contained in the consignment shall be as follows :

Selection of samples from a consignment.

(i) in cases-one sample for every 10,000 cases or part there of :

(ii) in casks or drums, declared to be of uniform quality-one sample for every 80,000 gallons or part thereof.

(iii) in bulk or in tanks-one sample for each tank or tank compartment.

95. (1) The Standard Test Apparatus and thermometers shall—

Standard Test Apparatus

(a) agree in every respect with the specifications laid down in Schedule III, and

(b) have been tested and certified by the Board of Trade or the National Physical Laboratory London and marked with the year of test.

(2) The standard thermometers shall be replaced at least once in every three years.

96. When any apparatus for determining the flashing point of petroleum is submitted to the officer appointed under sub-section (1) of section 15 of the Act for comparison with the Standard Test Apparatus, that officer shall examine the apparatus including the thermometers and the barometers or aneroids.

(2) No certificate shall be granted under section 16 of the Act if :—

(a) the apparatus is in any respect outside the tolerances laid down in Schedule III to these rules or is otherwise defective, or

(b) any thermometer shows readings varying by more than 1 F. at temperature of 76° F. and 125° F. as given by the Standard Test Apparatus : or

(c) any barometer or aneroid shows a variation of more than half an inch from the pressure given by the Standard Test apparatus.

(3) A certificate in Form C shall be granted in respect of any apparatus which has been found to agree with the Standard Test Apparatus within the limits mentioned in sub-rule (2).

(4) A certificate granted under this rule shall be valid for a period of three years.

97. A register of all certificates granted under rules 96 shall be maintained in Form D by the officer appointed under sub-section (1) of section (15) of the Act.

98. (i) The Testing Officer shall test the samples in the manner laid down in Schedule III to these rules.

Methods of test,

(2) In all cases at least three samples shall be separately tested, the average of the three readings being corrected for the thermometer correction if any, and for the barometric correction in case of dispute.

(3) If the average flashing-point is not lower than 76° F and no one test gives a flashing-point below 75° F the whole of the petroleum represented by the samples shall be deemed to be non-dangerous petroleum.

99. (1) If the Testing Officer, after testing samples taken from a consignment, considers further tests necessary to satisfy himself that none of the petroleum is dangerous, he shall report to the Officer-In-charge of the Customs Post of import accordingly.

Procedure when test show want of uniformity.

(2) On receipt of a report under sub-rule (1).
(a) when the the consignment is imported in cases, casks, or drums, the Office-In-charge of the Customs Posts shall cause the petroleum in question to be unloaded and stocked in lots of not more than 1500 cases or casks or drums each and the Sampling officer shall select and deliver to the Testing Officer one sample from each lot.

(b) when the consignment is imported in bulk, the Sampling Officer shall forward a second sample and the Officer-In-charge of the Customs Post may, until the receipt of the Testing Officer's further report, prevent the unloading of any portion of the contents of the tank in question or may permit it to be unloaded in anticipation of the Testing Officer's report if the consignee furnishes a guarantee to rebook the petroleum if the Testing Officer's report proves unfavourable.

100. (1) The Testing Officer shall as soon as practicable and ordinarily within twenty four hours after receipt of any sample make out a certificate in Form E and shall forward it to the officer submitting the sample.

Certificate of tests.

(2) The Testing Officer shall, at the request of any person concerned, furnish him with a certified copy of the certificate in Form E issued under sub-rule (1) on payment of a fee of one rupee.

101. (1) The fee for each inspection of the Standard Test Apparatus shall be one rupee.

Fee for inspection and comparison.

(2) The fees for comparing a privately owned Test Apparatus with the Standard Test Apparatus shall be as

follows :—

	Rs.
Abel Flash Point Apparatus or Pensky Martens Apparatus	30
Barometer Point Apparatus or Pensky-Martens Apparatus	10
Thermometer Point Apparatus or Pensky-Mortens Apparatus... ..	10
102. The fee for testing each sample of imported petroleum shall be five rupees.	

Fee for testing.

Provided that the aggregate fee chargeable under this sub rule shall not, in the case of any one clip exceed Rs. 50.

(2) The fee for retesting each sample under section 20 of the Act shall be five rupees. It shall be refunded if the original test is proved to be erroneous.

SCHEDULE I.

Licenses (Vide Rule 69).

Article No.	Form of license.	Purpose for which granted.	Fee.
1	F.	To import dangerous petroleum other than petroleum which can be used in an internal combustion engine, in quantity not exceeding 60 gallons at any one time.	Re. 1.
2	G.	To store dangerous petroleum in quantity not exceeding 60 gallons.	Rs. 4.
3	H.	To store non-dangerous petroleum otherwise than in bulk, in quantity not exceeding 5,000 gallons.	(a) When the quantity to be stored does not exceed five hundred gallons Rs. 8.
	I.	To store petroleum in a tank or tanks in connection with a pump outfit for fuelling motor conveyances.	(b) When the quantity to be stored exceeds five hundred but does not exceed one thousand gallons Rs. 12.
		(c) When the quantity to be stored exceeds one thousand but does not exceed five thousand gallons.	Rs. 12 for the first one thousand gallons plus Rs. 3 for every additional one thousand gallon or part thereof.

Form of license. Purpose for which granted. Fee.

(d) When the quantity to be stored exceeds five thousand but does not exceed 50,000 gallons. Rs. 24 for the first five thousand gallons plus Rs. 5 for every additional 1,000 gallons or part thereof.

5 J. To import dangerous petroleum and to store petroleum in installations. (e) When the quantity to be stored exceeds fifty thousand gallons Rs. 25.

6 K. To import and store dangerous petroleum otherwise than in bulk and to store otherwise than in bulk (a) non-dangerous petroleum in quantity exceeding 5,000 gallons of (b) partly dangerous petroleum and partly non-dangerous petroleum. (f) When the quantity to be stored or imported and stored does not exceed five hundred gallons Rs. 8.

7 Special forms. To import dangerous petroleum and to store petroleum (in cases not provided for in article 1, 2, 3, 4, 5 and 6). (g) When the quantity to be stored or imported and stored exceeds five hundred gallons. The same fees as those laid down for storage of non-dangerous petroleum.

SCHEDULE II.

*Form A (See Rule VII).***Certificate of storage accommodation.**

I hereby declare that I propose to store the following consignments of dangerous/non-dangerous petroleum arriving by Rail/Road on or about the _____ 19 . at the storage tanks or sheds of which particulars are given in capacity 1 and 2 of the statement below and I certify that the quantity shown as available in column 3 of that statement is available for the storage of the said petroleum, and that the said storage tanks and sheds are duly licensed for the storage of the petroleum in question.

*Importer or Agent.**Dated the* _____ *19* .**STATEMENT.**

1	2	3	4
Storage tanks or sheds.	Total capacity of each storage tank or shed.	Capacity available in each storage tank or shed	Capacity to be utilised by present consignment in each storage tank or shed.

Gallons ... Gallons ... Gallons.

Total Gallons ...

From B. (See Rule 68).

Application for the grant/renewal of a license to store or to import and store petroleum.

- | | | |
|---------------------|-----|---------------------------|
| 1. Applicant's Name | ... | The replies to be written |
| ,, Calling | ... | in this column. |
| ,, Address | ... | |

2. Situation of the premises where petroleum is to be stored :—

Province . . .

District ...

Town or village ...

3. Petroleum proposed to be stored—

Nature (*i. e.*, dangerous, non-dangerous or heavy petroleum).

Quantity { In bulk ...
Not in bulk

4. Form in which license is required.

5. Do the premises fulfil all the conditions endorsed on the form?

6. Petroleum already stored on the premises—

Nature ...

Quantity { In bulk ...
Not in bulk

7. Dangerous petroleum proposed to be imported—

Quantity $\left\{ \begin{array}{l} \text{In bulk} \quad \dots \\ \text{Not in bulk} \end{array} \right.$

Remarks ...

Signature of applicant.
 Postal address of applicant.
 Date of application.

NOTE.—This application if it relates to a new installation or storage shed or if the applicant proposes any alterations in an existing installation or storage shed, must be accompanied by specifications and plans drawn to scale in duplicate. The plans should clearly indicate :—

- (a) the manner in which the conditions prescribed by these rules have been complied with.
- (b) the premises to be licensed, the area of which shall be distinctively coloured or otherwise defined.
- (c) the surroundings and all protected works.
- (d) the position and capacity of all storage tanks, storage and filling sheds and the position of all other buildings and erections forming part of the installation.
- (e) the areas reserved for dangerous petroleum, heavy petroleum and non-dangarous petroleum other than heavy petroleum,
- (f) tanks and other enclosures,
- (g) all pumps, valves, filling and discharge points, vent pipes etc.

FORM C.

(See Rule 96).

Certificate of Apparatus.

_____ Apparatus.

Marked No. _____

Maker's Name _____

Slide No. _____

Thermometer No. _____ Oil Cup.

No. _____ Water Bath.

Cup No. _____

The above apparatus including the thermometers having been submitted for verification with the Standard Test Apparatus was compared by me on _____ and found to agree with it within the prescribed limits.

The following corrections are necessary to the thermometer and barometer or aneroid readings :—

Thermometer No. _____

No. _____

Barometer or Aneroid No. _____

Date _____

Reference _____

SIGNATURE AND DESIGNATION OF THE OFFICER,

appointed under Section 15 (1) of the Petroleum Act, 1998.

FORM D.

(See Rule 97).

Register of certificates of apparatus.

Serial No.	Place at which the apparatus is intended to be used.	Number and date engraved on the apparatus.	Contents of certificate.	Date on which certificate will cease to be valid.
------------	--	--	--------------------------	---

FORM E.

(See Rule 100).

Certificate of tests of petroleum.

Owner _____

Marks _____

Test (1) _____

(2) _____

(3) _____

Average _____ Thermometer

Correction _____

The sample is _____

Petroleum and (in the case of non-dangerous petroleum)
has a flashing point of _____

Place _____

Date _____

Testing Officer.

FORM F.

(Article 1 of Schedule 1).

License to import dangerous petroleum other than petroleum which can be used in an internal combustion engine, in quantity not exceeding 60 gallons at any one time.

No.....

Fee Re. 1.

License is hereby granted to.....to import dangerous petroleum other than petroleum which can be used in an internal combustion engine, not exceeding sixty gallons in quantity at any one time, at.....subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall remain in force tiil the..... 19 .

The..... 19 .

*Licensing Authority.***CONDITIONS OF LICENSE.**

1. Dangerous petroleum shall be imported in gas-tight tinned, galvanised or otherwise externally rust-proofed sheet iron or steel receptacles which shall be fitted with well-made filling apertures and well-fitting screw plugs or with screw caps or other caps with metal air-tight under-caps.

2. The receptacles shall have the following thickness of metal:—

Not less than.

Capacity exclusive of the prescribed
air-space.

Not exceeding 2 gallons	...	27 B. G.
exceeding 2 but not exceeding 4 gallons		22 B. G.
exceeding 4 but not exceeding 30 „		18 B. G.
exceeding 30 but not exceeding 45 „		17 B. G.
exceeding 45 gallons.		16 B. G.

3. The receptacles shall be so constructed and secured as

not to be liable except under circumstances of gross negligence or extraordinary accident, to become defective, leaky or insecure in transit and shall bear a stamped, embossed, painted or printed warning exhibiting in conspicuous characters the words "Highly inflammable" or an equivalent warning of the dangerous nature of the petroleum.

4. An air-space of not less than $7\frac{1}{2}$ per cent of its capacity shall be left in each receptacle at the time of filling.

FORM G.

(Article 2 of Schedule I).

License to store dangerous petroleum in quantity
not exceeding 60 gallons.

No.....

Fee Rs. 4.

License is hereby granted to.....
valid only for the storage of gallons of dangerous
petroleum in the storage shed described below, subject to the
provisions of the Petroleum Act 1998, and the rules made
thereunder and to the further conditions on the back of this
license.

This license shall remain in force till the
19 .
The.....19 .

LICENSING AUTHORITY.

Description of the storage shed referred to above,

Date of renewal. Date of expiry.

Signature of Licensing
Authority .

This license is liable to be cancelled if the licensed premises
when inspected are not found conforming to the description and
conditions attached hereto and contravention of any of the
rules and conditions under which this license is granted is also
punishable with fine which may extend to five hundred rupees
for a first offence and which may extend to two thousand rupees
for any subsequent offence.

Conditions of License.

1. Dangerous petroleum shall be stored only—
 - (i) in a storage shed constructed of suitable uninflam-
mable material, the doors and windows may be of
wood, or

(ii) in a properly ventilated iron bin of a design approved by the Licensing Authority placed on private ground in the open air.

2. The storage shed shall be adequately ventilated near the ground level and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze mesh not less than 28 to the linear inch.

3. The storage shed shall not form part of, or be attached to any building in which any person resides or works or where persons assemble for any purpose unless it is separated therefrom by a substantial floor or partition which is constructed of unflammable material and has no openings therein.

4. The storage shed, if in any building, shall not be situated under any staircase or under any other means of exit likely to be required to be used for escape in case of fire.

5. Any two storage sheds or bins or other storage premises not more than twenty feet apart, shall be deemed to be one storage shed.

6. No alterations shall be carried out in the storage shed or bin without the previous sanction in writing of Licensing Authority.

7. If the Licensing Authority calls upon the holder of a license, by a notice in writing, to execute any repairs to the storage shed which are in the opinion of such authority, necessary for the safety of the shed, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

8. Dangerous petroleum other than paints, varnishes, lacquers and similar products shall not be kept in any receptacle other than the standard petrol tins of capacity not exceeding two gallons exclusive of the prescribed air-space.

9. All empty receptacles which have contained dangerous petroleum shall except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum vapour.

10. No receptacles shall be repaired on the premises and no person shall repair or cause to be repaired any receptacle in which, to his knowledge, any dangerous petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle has been rendered free from dangerous petroleum and any inflammable vapour.

11. Adequate precautions shall be taken at all time for

the prevention of accident by fire or explosion.

12. Every care shall be taken to prevent any dangerous petroleum escaping into any drain, sewer, harbour, river or watercourse.

13. Adequate precautions shall be taken to prevent unauthorised persons having access to any dangerous petroleum kept and to the vessel which contains or has contained petroleum.

14. Any accident, fire, or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property, shall be reported to the nearest Magistrate or to the Officer In-charge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

15. Free access to the licensed premises shall be given at all reasonable time to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

FORM H.

(Article 3 of Schedule I).

License to store non-dangerous petroleum, otherwise than in bulk, in quantity not exceeding 5,000 gallons.

No.....

Fee Rs.....

License is hereby granted to.....
valid only for the storage of.....gallons of non-dangerous petroleum in the storage shed described below, subject to the provisions of the Petroleum Act 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall remain in force till the.....19 .

The.....19 .

LICENSING AUTHORITY.

Description and location of the storage shed referred to above.

Date of renewal. Date of expiry- Signature of Licensing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

(1) The petroleum shall be stored only in the storage shed which shall be constructed of suitable unflammable material, but the beams, rafters, columns windows and doors

may be of wood. The building shall rest on foundation walls, the walls and floors being suitably finished to form a sump or enclosure not more than 2 feet in depth and capable of receiving and retaining, in cases of accident or emergency, a volume not less than the maximum quantity of petroleum allowed in the building.

2. The storage shed shall not form part of, or be attached to, any building in which any person resides or works or where persons assemble for any purpose unless it is separated therefrom by a substantial floor or partition which is constructed of unflammable material and has no opening in it.

3. The storage shed, if in any building, shall not be situated under any staircase or under any other means of exit likely to be required to be used for escape in case of fire.

4. No alterations shall be carried out in the storage shed without the previous sanction in writing of the Licensing Authority.

5. If the Licensing Authority calls upon the holder of a license, by a notice in writing to execute any repairs to the storage shed, which may, in the opinion of such authority, be necessary for the safety of the shed, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

6. Any two storage sheds not more than 15 feet apart shall be deemed to be one storage shed.

7. Non dangerous petroleum shall be packed in air-tight tins or drums of steel or iron or in other receptacle not easily broken.

8. The drum or other receptacle containing petroleum shall only be opened in the licensed premises and for the time necessary for drawing off the petroleum, and during such drawing off every reasonable precaution shall be adopted for preventing the escape of petroleum or the vapour therefrom.

9. Adequate precautions shall be taken to prevent unauthorised persons having access to any petroleum kept and to any receptacles which contain or have contained petroleum.

10. Adequate precautions shall be taken at all times for the prevention of the accident by fire or explosion.

11. Every care shall be taken to prevent any petroleum

escaping into any drain, sewer, river or watercourse.

12. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property shall be reported to the nearest Magistrate or to the Officer-Incharge of the nearese police station immediately and by telegraph or telephone where such means of communication are available.

13. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and conditions of this license are duly observed.

FORM I

(Article 4 of Schedule 1.)

License to store petroleum in a tank or tanks in connection with a pump outfit for fuelling motor conveyances.

No.

Fee Rs.

License is hereby granted to——— valid only for the storage of———gallons of petroleum in a tank (tanks) in the licensed premises described below and shown on the plan hereto attached subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this license.

This license shall be renewable for———years in the absence of contravention of the provisions of the Petroleum Act, 1998 or of the rules framed thereunder or of any condition of this license.

This licence shall remain in force till the———
19 .

The———19 .

LICENSING AUTHORITY.

Plan No.———Dated———

Description of the licensed premises referred to above. The licensed premises are situated——— and consist of a gas-tight tank (tanks of a capacity of———gallons sunk———underground.

Date of renewal. Date of exp ry. Signature of Licensing Authority.

Conditions of Licence.

1. The petroleum shall be stored in one or more gas-tight metal tanks of a capacity of———gallons sunk completely underground in the position shown on the plan attached hereto and each placed in a masonry or concrete pit, the tank being packed round with sand, earth or clay so that no air-space is left between the tank and the masonry or concrete pit and the tank is not visible. Such masonry or concrete pit shall not be obligatory if the tank is a welded one tested upto a pressure of 3 lbs. per square inch and is buried and is on private, leased or rented land away from public traffic. The space over the buried tanks must not be used for any purpose.

2. There shall no openings in any tank other than those necessary for the introduction or removal of the petroleum or for ventilating or dipping the tank. The filling and dipping pipes shall be carried down nearly to the bottom of the tank.

3. Every tank shall be fitted with a vent pipe leading into the open air. The vent pipe shall be securely supported and shall be not less than 12 feet in height. The upper opening shall be covered with the fine copper or other non-corroding metal wire gauze of mesh not less than 28 to the linear inch and fitted with a hood or the upper opening shall be fitted with an inlet valve and an exhaust valve.

4. After that no pump or tank shall be erected inside a building and if prior to that date any tank is installed inside a building, it shall only be filled from a tank-wagon through an under-ground filling pipe having a filling point in the open air at a distance of not less than 12 feet from the building.

5. No alteration of the position of a pump or tank and no replacement of a tank shall be effected except with the previous sanction in writting of the Licensing Authority. All alterations sanctioned under this condition shall be shown on an amended plan to be attached to this licence.

6. If the Licensing Authority calls upon the holder of a licence by a notice in writing to execute any repairs to the licensed premises which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the licence shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

7. Every tank, before being repaired, shall be cleared of all potroleum and of all inflammable vapours. When a tank in position is open for cleaning or repairs no electric or other

lamps, electric cables or electric fans shall be brought near the manhole of the tank until the tank has been certified in writing to be "gas free" by a qualified Chemist or Engineer. (The inside of the tank may be lighted by the use of mirrors).

8. The petroleum shall enter a tank "under seal" and shall not be supplied to the tank between the hours of sunset and sunrise except by a motor tank-wagon of a type approved by the Inspector General Police for the purpose and with the approval in writing of the Licensing Authority.

9 No artificial light capable of igniting inflammable vapour shall at any time be present in the immediate vicinity of the tank-wagon during the transfer of the petroleum to the tank and no person engaged in such transfer shall smoke. When the underground tank is filled with petroleum from barrels no such light shall be allowed within a distance of 30 feet from the barrels.

10. No petroleum shall be removed from a tank except by means of the pump or pumps at the position marked on the plan hereto attached. Every pump shall together with its connections and fittings be so constructed and maintained as to be gas and petroleum-tight. The pipe connections between the tank and a pump shall be placed under-ground.

11. For the purpose of charging the tanks of motor vehicles the petroleum shall only be supplied by being :—

- (a) pumped through strong metal piping by means of approved pumps into above ground measuring tanks of a capacity not exceeding 30 gallons, fixed in approved position, and run thence through sound hose, fitted with a secure self-closing cock and nozzle, into the tank of motor vehicles, or
- (b) pumped through strong metal piping by means of approved pumps into the above ground service tank of approved capacity, fixed in an approved position, and run thence through strong metal piping into measuring tanks of a capacity not exceeding 30 gallons fixed in approved positions and thence through sound hose, fitted with a secure self-closing cock and nozzle, into the tanks of motor vehicles, or
- (c) pumped by means of approved measuring pumps, fixed in approved positions, through sound hose fitted with a secure tap and nozzle, into the tanks of motor vehicles.

12. Petroleum may be supplied to a motor vehicle between the hours of sunset and sunrise from the pump

provided that (i) lights other than the electric lights of the vehicle receiving the petroleum are extinguished, (ii) the pump and the vehicle are illuminated by electric light or failing this by some other form of lighting and (iii) no light capable of igniting inflammable vapour is situated or brought within twelve feet of the pump or vehicle receiving the petroleum.

13. (a) Petroleum shall not be placed in any motor vehicle while the engine is running and, where the vehicle is licensed for the conveyance of more than six passengers on hire, while any passenger remains in the vehicle, and

(b) persons in and engaged in connection with any motor vehicle shall not be permitted to smoke while it is being refuelled.

14. Except when absolutely necessary for the purpose of condition 7 or for testing the accuracy of the pump's discharge by means of a standard capacity measure, petroleum shall not be filled from the tank or pump into any receptacle other than one clamped or fitted to a motor vehicle.

15. This licence shall be held to cover the use of a portable kerbside-pump outfit for a period of not more than one month in the place of the licensed permanent outfit in the event of the latter being out of order, provided notice in writing is given to the Licensing Authority before the portable pump is taken into use, and conditions of this licence which apply to a portable pump are observed. No petroleum shall be allowed above ground (except that actually in the pump) in any case where the underground tanks can be used in connection with the portable pump by making a temporary connection from the portable pump to the underground tank.

16. In case where portable pumps are used not more than two barrels of petroleum in reserve shall be kept within 20 feet of the pump or on public property nearby.

17. A licensee who stores dangerous petroleum intended for sale may stock in a building within the licensed premises not more than 6 gallons of dangerous petroleum in securely closed two-gallon standard tins, and shall, if so required by the District Authority, stock at least 2 gallons.

18. Adequate precautions shall be taken to prevent unauthorised persons from having access to the petroleum or to the vessels which contain or have contained petroleum.

19. Every person managing or employed on or in connection with the licensed premises shall abstain from any act whatever which tends to cause fire or explosion and which is not reasonably necessary and, to the best of his ability, shall prevent any other person from doing such act.....

20. Every care shall be taken to prevent any petroleum escaping into any drain or sewer.

21. The licensee shall provide for each pump, whether kerbside or portable, a minimum of two tins or drums of dry sand which shall be kept ready for extinguishing fires.

22. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to person or property, shall be reported to the nearest Magistrate or to the Officer-Incharge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

23. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this licence are duly observed.

FORM J.

(Article 5 of Schedule 1.)

Licence to import dangerous petroleum and to store petroleum in installations.

No.

Fee. Rs.

Licence is hereby granted to _____ valid only for the importation of _____ gallons of dangerous petroleum and for the storage of _____*gallons of petroleum in the place described below and shown on the plan attached hereto subject to the provisions of the Petroleum Act, 1998, and the rules made thereunder and to the further conditions on the back of this licence.

This licence shall remain in force till the _____
19 .

Gallons.

*Dangerous petroleum in bulk ...

Dangerous petroleum otherwise than in bulk ...

Non-dangerous petroleum in bulk ...

Non-dangerous petroleum otherwise than in bulk ...

Total ...

The _____ 19 .

LICENSING AUTHORITY.

Plan No. _____ Dated _____

Description of the plan referred to above.

Date of renewal. Date of expiry. Signature of Licencing Authority.

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. Petroleum shall be kept only in the storage tanks and storage and filling sheds or other approved places within the installation specified for the purpose on the plan attached hereto.

2. (i) The tank or tanks shall be supported on an approved foundation and shall be surrounded by a wall or embankment of substantial construction, or shall be partially sunk in an excavation. The enclosure thus formed shall contain only one of the following classes of petroleum, shall be of dimensions sufficient to contain the quantity of petroleum specified under the class to be stored and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid, whether under the action of fire or otherwise.

(a) Dangerous petroleum 10 percent, more petroleum than the tank or tanks are capable of containing ;

(b) Non-dangerous petroleum other than heavy petroleum the amount of petroleum the tank or tanks are capable of containing ;

(c) Heavy petroleum the amount of petroleum the largest tank in the enclosure is capable of containing ;

Provided that heavy petroleum may be stored in the same enclosure as non-dangerous petroleum other than heavy petroleum if the dimension under (b) above is observed.

(ii) Except for the necessary pipes and valves the space within an enclosure and not occupied by the tank or tanks, shall be kept entirely clear and unoccupied. Alternatively gas-tight metal tanks may be sunk completely underground the tanks being packed round with sand, earth or clay, so that no air-space is left below ground level and the tank is not visible. Tanks so buried shall not be required to maintain the safety distances laid down in condition 8 but the space over the buried tanks must not be used for any purpose. The filling and dipping pipes in an underground tank shall be carried down to the

bottom of the tank.

3. All tanks shall be fitted with a vent pipe leading into the open air, the open end being covered with fine copper or other non corroding metal wire gauze of mesh not less than 28 to the linear inch and fitted with a hood or the tank shall be fitted with an approved relief valve or other approved means for preventing dangerous internal or external pressures being produced.

4. Cast iron valves are not permitted on any tank and all valves in an installation must be permanently marked in a manner clearly indicating the direction of opening and shutting the valve.

5. Pumps shall be placed only in the positions shown on the plan attached hereto and they shall together with all connections and fittings be so constructed and maintained as to prevent leakage of petroleum.

6. Storage or filling sheds shall be constructed of suitable unflammable material. The building shall rest on foundation walls and shall be surrounded by a wall or embankment of substantial construction or the walls and floor shall be suitably finished to form a sump or enclosure not more than 2 feet deep. A combination of these methods is permissible. The enclosure or sump thus formed shall be of sufficient capacity to contain the total quantity of petroleum liable at any time to be present in the building and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid whether under the action of fire or otherwise. In the case of dangerous petroleum or partly dangerous and partly non-dangerous petroleum the enclosure or sump shall be capable for receiving and retaining a volume not less than 5 per cent, in excess of the maximum quantity allowed in the building. The sumps and enclosures must be kept clean and free from any accumulation of inflammable liquids.

7. Every storage or filling shed in which dangerous petroleum is stored or filled shall be adequately ventilated near the ground level immediately above any walls constructed to prevent any leakage of petroleum and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze of mesh not less than 20 to the linear inch.

8. (a) A distance of not less than 100 feet shall be kept clear between (i) a storage tank and any other storage tank, (ii) between a storage tank and a storage or filling shed the distance being measured between the nearest points of the perimeters of the storage tanks or storage or filling sheds, as

the case may be.

(b) A distance of not less than 150 feet shall be kept clear between any storage tank or storage or filling shed and any protected work.

(c) Notwithstanding anything contained in clause (a) or clause (b)

(i) Where the quantity of dangerous petroleum or partly dangerous and partly non-dangerous petroleum not in bulk to be stored in a storage shed does not exceed 50000 gallons, the following reduced distances may be kept clear between the shed or enclosure wall and (a) any other building forming part of the installation, (b) any protected work, or (c) any storage tank containing non-dangerous petroleum having a capacity not exceeding 30,000 gallons :—

	Feet
Not exceeding 1,000 gallons	... 20
Exceeding 1,000 gallons but not exceeding 10,000 gallons.	30
Exceeding 10,000 gallons but not exceeding 20,000 gallons.	40
Exceeding 20,000 gallons but not exceeding 30 000 gallons.	50
Exceeding 30,000 gallons but not exceeding 40,000 gallons.	60
Exceeding 40,000 gallons but not exceeding 50,000 gallons.	70

(ii) When a storage tank containing non-dangerous petroleum has a capacity not exceeding 100,000 gallons, a distance of not less than 50 feet may be kept clear between it and (a) another such tank of similar or less capacity, or (b) a storage or filling shed containing non-dangerous petroleum.

Such a storage tank and storage or filling shed may, where the total quantity stored does not exceed 200,000 gallons, keep a distance of not less than 50 feet clear between the enclosure wall or embankment and any protected works.

(iii) When a storage tank containing non-dangerous petroleum has a capacity not exceeding 50,000 gallons, a distance of—

(a) for horizontal tanks, not less than one-third

- (b) for perpendicular tanks, not less one-half the height of the tank may be kept clear between it and (a) another such tank or (b) a storage or filling shed wherein non-dangerous petroleum is stored in quantity not exceeding 50,000 gallons.

Such a storage tank and storage or filling shed may, where the total quantity stored does not exceed 100,000 gallons keep a distance of not less than 20 feet clear between the enclosure wall or embankment and any protected works.

(iv) In the case of heavy petroleum a distance of not less than 20 feet may be kept clear between a storage tank and (a) another such tank or (b) a storage or filling shed containing such petroleum and a distance of not less than 50 feet shall be kept clear between such storage tank or filling or storage shed and any protected works. When the total quantity stored in such storage tank and storage or filling shed does not exceed 100,000 gallons, half the distances given in clause (iii) for the like quantity of non-dangerous petroleum other than heavy petroleum may be observed.

9. The distances specified in condition 8 may be reduced by the Licensing Authority in cases where screen walls are provided or other special precautions taken or where there are special circumstances that, in his opinion, warrant the alteration.

10. Notwithstanding anything herein to the contrary when petroleum is stored in an installation at or near wells, pumping stations or refineries, the concessions in clause (c) of condition 8 shall not apply and no storage tank, the capacity of which exceeds 50,000 gallons, or storage or filling shed shall be placed nearer than 300 feet to any still, boiler, furnace or fire. In such an installation all tanks shall be situated in a compact area (a) under a single control, (b) enclosed or capable of being enclosed by one continuous fence, (c) on which there shall be no protected works.

11. No alterations shall be carried out in the installation without the previous sanction in writing of the Licensing Authority. Such alterations so sanctioned shall be shown on an amended plan to be attached to this license.

12. If the Licensing Authority calls upon the holder of a license, by a notice in writing, to execute any repairs to the licensed premises, which are, in the opinion of such authority, necessary for the safety of the premises, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice as may be fixed by the notice.

13. The responsible agent or supervisor referred to in Rule 92 shall not allow any person to enter a tank, which has contained petroleum, unless—

- (a) Such person wears a safety helmet of a description approved by Licensing Authority, or
- (b) (i) the responsible agent or supervisor has certified in writing, as the result of an examination of the tank by himself or by some other competent person, that the atmosphere in the tank is fit for persons to enter, and
- (ii) at least one safety helmet of a pattern approved by the Licensing Authority shall have been kept ready for the instant use at the manhole of the tank which is being cleaned or repaired.

14. No work involving the use of fire, welding or hot rivetting, shall be performed in or on any tank until the tank has been certified in the manner laid down in clause (b) of condition 13 to be free from petroleum vapour. When any water is pumped into or withdrawn from the tank no further work of the above description shall be done until the tank has re-tested and a fresh certificate issued. When a tank is open for cleaning or repairs no lamps of any description either ordinary or electric, electric torches, electric cables or fans other than of a flame-proof type satisfying No. 229 the requirements of the British Standard Specification No. 22 shall be brought near the tank.

15. No person shall repair or cause to be repaired any receptacle or pipe in which, to his knowledge, any petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle or pipe has been rendered free from petroleum and any inflammable vapour ;

Provided that this condition shall not be deemed to prohibit the usual soldering operations connected with the filling and despatching of petroleum receptacles.

16. All empty receptacles which have contained dangerous petroleum shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum and inflammable vapour.

17. Adequate precautions shall be taken at all times for the prevention of accident by fire or explosion.

18. Every care shall be taken to prevent any petroleum escaping into any drain, sewer harbour, river or water course and enclosures or sumps must not be permanently connected with any drain or sewer.

19. Any accident, fire or explosion occurring within the area specified in the license, which is attended with loss of human life or serious injury to person or property shall be reported to the nearest Magistrate or to the Officer-In Charge of the nearest police station immediately and by telegraph or telephone where such means of communication are available.

20. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

FORM K.

(Article 6 of Schedule 1.)

License to import and store dangerous petroleum otherwise than in bulk and to store otherwise than in bulk a) non-dangerous petroleum in quantity exceeding 5,000 gallons, or (b) partly dangerous petroleum and partly non-dangerous petroleum.

No.

Rs.

License is hereby granted to _____ valid only for the importation of _____ gallons of dangerous petroleum and _____ gallons of non-dangerous petroleum in the storage shed described below and shown on the plan attached hereto, subject to the provisions of the Petroleum Act 1998 and the rules made thereunder and to the further conditions on the back of this licence.

This license shall remain in force till the 19 .

The

19 .

LICENSING AUTHORITY.

Plan No. _____, dated

Description of the storage shed referred to above.

Date of renewal.	Date of expiry.	Signature of Licensing Authority.
------------------	-----------------	--------------------------------------

This license is liable to be cancelled if the licensed premises when inspected are not found conforming to the description and conditions attached hereto and contravention of any of the rules and conditions under which this license is granted is also punishable with fine which may extend to five hundred rupees for a first offence and which may extend to two thousand rupees for any subsequent offence.

Conditions of License.

1. The petroleum shall be stored only in the storage shed which shall be constructed of suitable unflammable material provided that, when only non-dangerous petroleum is stored, the beams, rafters, columns, windows and doors may be of wood. The building shall rest on foundation walls and shall be surrounded by a wall or embankment of substantial construction or the walls and floor shall be suitably finished to form a sump or enclosure not more than two feet deep. A combination of these methods is permissible. The enclosure or sump thus formed shall be of sufficient capacity to contain the total quantity of petroleum liable at any time to be present in the building and shall be so constructed and maintained as to prevent the escape therefrom of any petroleum in the form of liquid whether under the action of fire or otherwise. In the case of dangerous petroleum or partly dangerous and partly non-dangerous petroleum the enclosure or sump shall be capable of receiving and retaining a volume not less than 5 per cent in excess of the maximum quantity allowed in the building. The sumps and enclosures must be kept clean and free from any accumulation of inflammable liquids.

2. The storage shed, if it is used for the storage of dangerous petroleum, shall be adequately ventilated near the ground level immediately above any walls constructed to prevent any leakage of petroleum and also near or in the roof. The ventilators shall be provided with two thicknesses of fine copper or other non-corroding metal wire gauze of mesh not less than 28 to the linear inch.

3. If the Licensing Authority calls upon the holder of a license, by a notice in writing to execute any repair to the licensed premises which may, in the opinion of such authority, be necessary for the safety of the premises, the holder of the license shall execute the repairs within such period, not being less than one month from the date of receipt of the notice, as may be fixed by the notice.

4. No alteration shall be carried out in the licensed premises without the previous sanction in writing of the Licensing Authority. All alterations shall be shown on an amended plan to be attached to this license.

5. The following distances shall be kept clear at all times between protected works and a storage shed or an enclosure wall used for the storage of dangerous petroleum or partly dangerous and partly non-dangerous petroleum :—

Quantity to be stored.

Distances to be
Kept clear.

Feet

Not exceeding 500 gallons	...	20
Exceeding 500 gallons but not exceeding 1,000 gallons.		25
Exceeding 1,000 gallons but not exceeding 5,000 gallons.		30
Exceeding 5,000 gallons but not exceeding 20,000 gallons.		40
Exceeding 20,000 gallons but not exceeding 30,000 gallons.		50
Exceeding 30,000 gallons but not exceeding 40,000 gallons.		60
Exceeding 40,000 gallons but not exceeding 50,000 gallons.		70
Exceeding 50,000 gallons	...	100

6. The following distances shall be kept clear at all times, between protected works and a storage shed or an enclosure wall used for the storage of non-dangerous petroleum only :—

Quantity to be stored.

Distance to be
Kept clear.

Feet

Exceeding 5,000 gallons but not exceeding 10,000 gallons.		15
Exceeding 10,000 gallons but not exceeding 50,000 gallons.		20
Exceeding 50,000 gallons	...	30

7. The distances specified in conditions 5 and 6 may be reduced by the Licensing Authority in cases where screen walls are provided or other special precautions taken or where there are special circumstances that, in his opinion, warrant the reduction.

8. Drums or other receptacles containing petroleum shall only be opened in the licensed premises and for the time necessary for drawing off the petroleum, and during such drawing off every reasonable precaution shall be adopted for preventing the escape of petroleum or the vapours therefrom.

9. All empty receptacles which have contained dangerous petroleum shall, except when they are opened for the purpose of cleaning them and rendering them free from petroleum vapour, be kept securely closed unless they have been thoroughly cleaned and freed from petroleum and inflammable vapour.

10. No person shall repair or cause to be repaired any receptacle in which, to his knowledge, any petroleum is or has been kept until he has taken all reasonable precautions to ensure that the receptacle has been rendered free from petroleum and any inflammable vapour ;

Provided that this condition shall not be deemed to prohibit the usual soldering operations connected with the filling and despatching of petroleum receptacles when such operations are conducted in an approved place outside the storage shed.

11. Adequate precautions shall be taken at all times for the prevention of accident by fire or explosion.

12. Every care shall be taken to prevent any petroleum escaping into any drain, sewer, river or water course

13. Adequate precaution shall be taken to prevent unauthorised persons having access to any petroleum kept and to any receptacles which contain or have contained petroleum.

14. Any accident, fire or explosion occurring within the licensed premises, which is attended with loss of human life or serious injury to persons or property shall be reported to the nearest Magistrate or to the Officer-In-charge of the nearest police station immediately and by telegraph or telephones where such means of communication are available.

15. Free access to the licensed premises shall be given at all reasonable times to any Inspector or Sampling Officer and every facility shall be afforded to such officer for ascertaining that the rules and the conditions of this license are duly observed.

SCHEDULE III.

METHODS OF TESTING PETROLEUM.

Determination of Flashing-point.

(See rules 95 and 98)

1. APPARATUS TO BE USED.

The flashing-point of petroleum and petroleum mixtures which are fluid at 50° F and which flash not above 120° F, shall be determined by the Abel Apparatus as hereinafter defined.

The flashing-point of petroleum and petroleum mixtures which are sold at 50° F and which flash, not above 120° F shall be determined by the Abel Apparatus, the test being modified as hereinafter described.

The flashing-point of petroleum and petroleum mixtures which flash above 120° F shall be determined by the Pensky Martens Apparatus as hereinafter defined.

II PREPARING THE SAMPLES FOR TEST

About ten fluid ounces of the sample, sufficient for three tests, should be transferred from the bottle, into which the sample has been drawn to a pint flask or bottle, which should be immersed in water artificially cooled until a thermometer introduced into the sample, indicates a temperature not exceeding 50 F.

III (i) ABEL APPARATUS

The apparatus to be employed shall be the Abel Petroleum Testing Apparatus modified by having an oil cup provided with a stirrer. It shall be constructed to the dimensions here in specified within the limits of accuracy prescribed by the tolerances set forth below.

Oil cup—The oil cup consists of a cylindrical vessel open at the top, and fitted on the outside with a flat circular flange projecting at right angles.

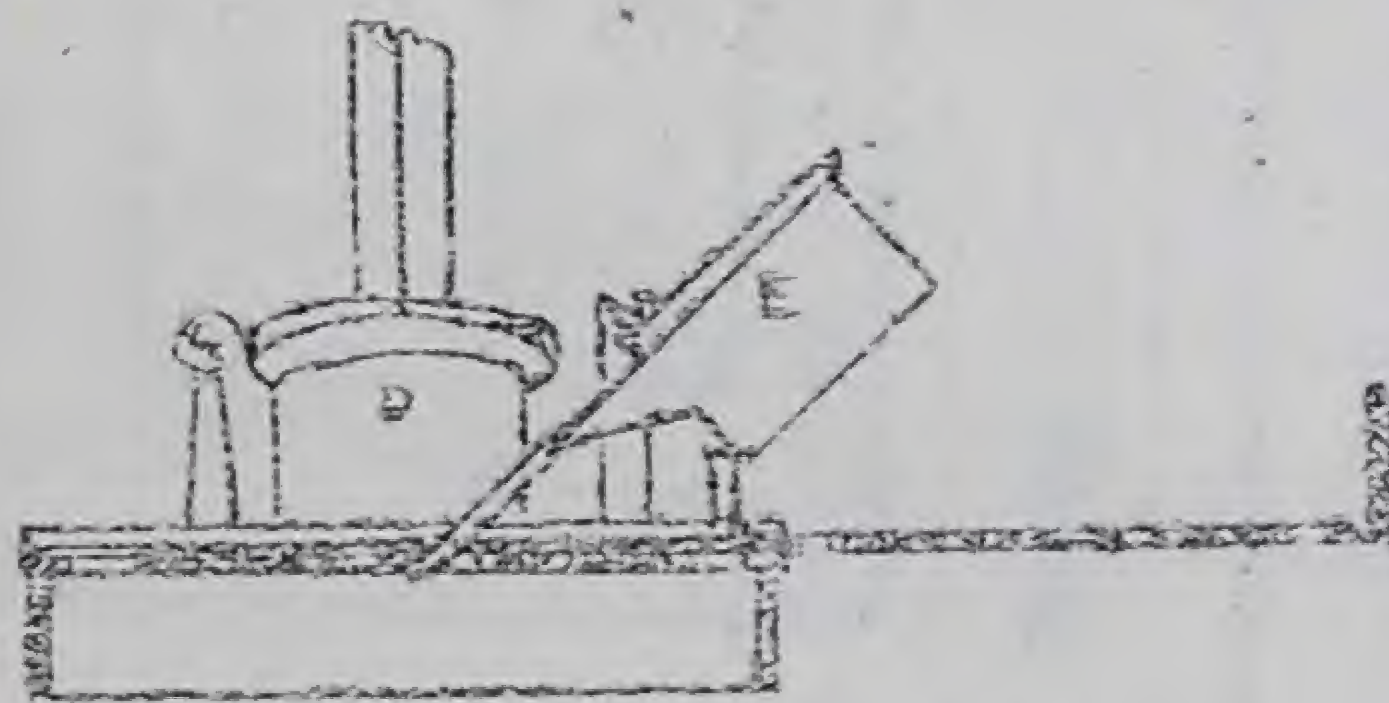
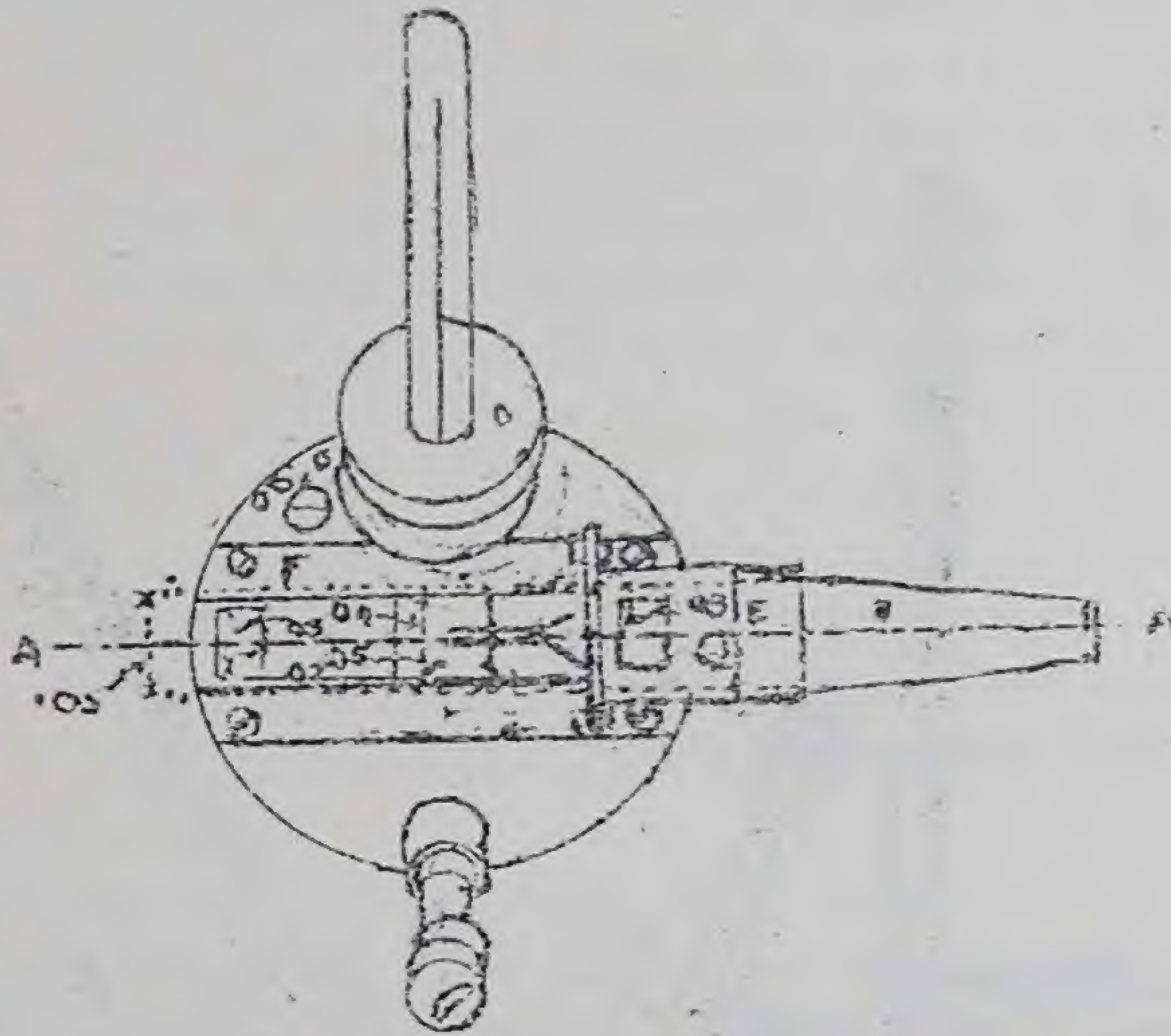
Within the cup, fixed thorough the wall and silver soldered

or brazed in place, there is a gauge consisting of a piece of wire bent upwards and terminating in a point.

Material— Brass or gun-metal.

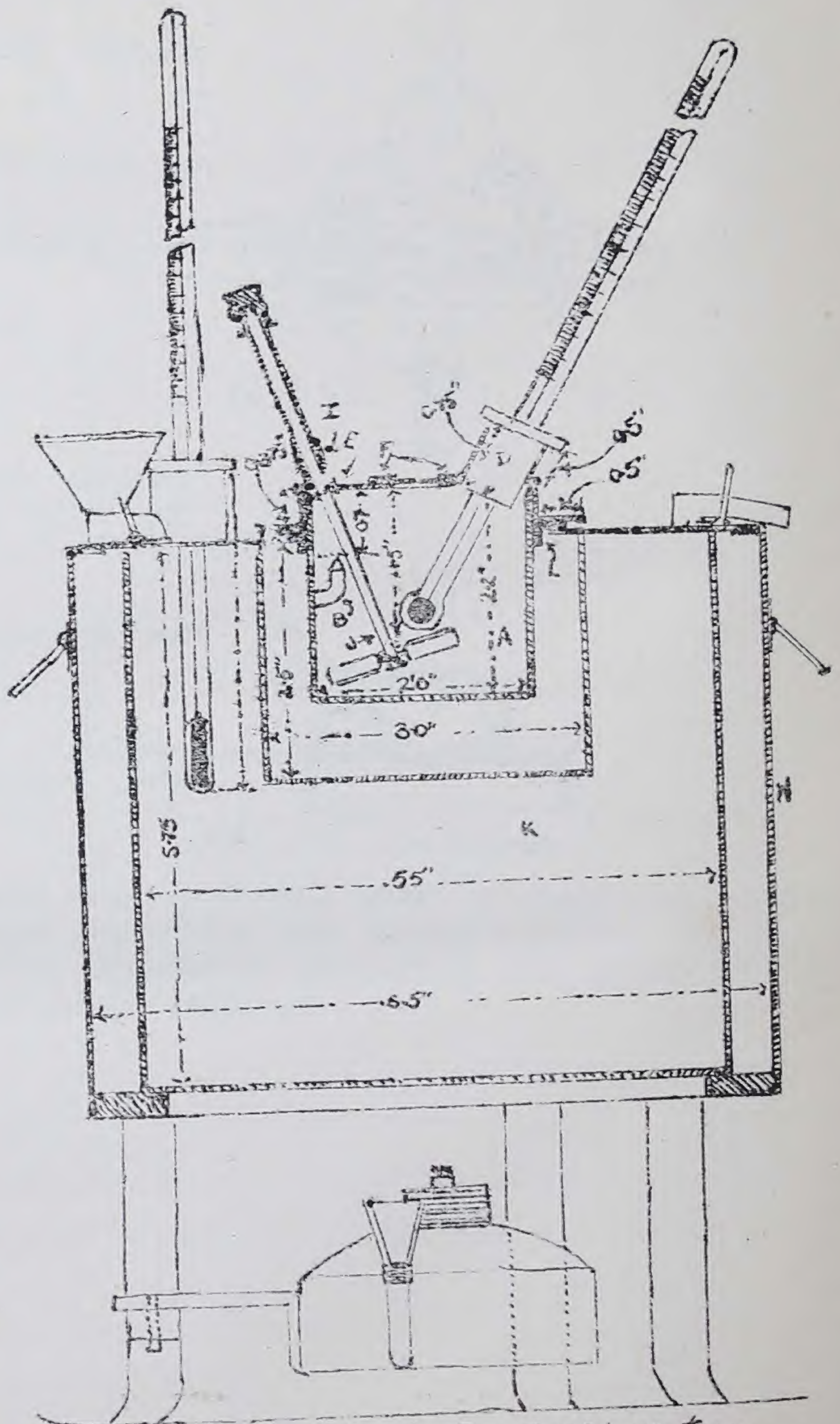
	Dimension.	Tolerance. in.
Cup, wall and bottom thickness	17 I. W. G.	...
Cup, internal diameter ...	2 in.	± 0.05
Cup, internal depth ...	2 2 in.	± 0.05
Flange, thickness ...	17 I. W. G.	...
Flange width ...	0.5 in.	± 0.05
Flange, distance of upper side from top edge of cup	0.375 in.	± 0.05
Gauge, thickness not less than	10 I. W. G.	...
Gauge, distance of point from level of upper edge of cup	0.7 in.	± 0.005

Cover—The cup provided with a close-fitting cover with a downward projecting rim barely reaching the flange on the cup. The downward projecting rim is made solid with the top or silver soldered.



Section on A.A.

or brazed in place. Upon the cover are mounted a thermometer socket, trunnions to support an oil test-lamp a pair of guides in which a slide



Abel Flash Point Apparatus

COVER OF ABEL FLASH-POINT APPARATUS.

(Slide open.)

moves, and a white bead. The top of the cover is pierced by three rectangular holes symmetrically placed on a diameter one in the centre and the other two as close as practicable to the inner sides of the cover rim and opposite each other. These three holes are covered or uncovered by means of a slide moving in suitably disposed guides. The slide has two perforations, one corresponding in all particulars to the centre hole in the cover and other to one of the holes at the side. The movement of the slide is restricted by suitable stops, and its length and the disposition of the holes are such, that at the outer extremity of the movement of the slide, the holes in the cover are simultaneously just completely opened and at the inner extremity of the movement of the slide they are completely closed.

The trunnions supporting the test lamp are fixed on the top of the guides and the lamp is mounted in the trunnions so that it is free to oscillate. The lamp is provided with a jet to contain a wick and is so arranged that when the slide is moved so as to uncover the holes, the oscillating lamp is caught by a pin fixed in the slide and tilted over the central hole in such a way that the lower edge of the cover bisects the circle formed by the bore of the jet when in the lowest position. The flame then occupies a central position within the hole in both directions.

A suitably mounted gas-jet may be substituted for the lamp.

	Dimension.	Tolerance. in.
Cover thickness ...	0.05 in ...	± 0.015 .
Cover, central hole, length (in direction of slide) ...	0.5 „ ...	± 0.005 .
Cover, central hole, width.	0.4 „ ...	± 0.005 .
Cover, peripheral holes, length (in direction of slide) ...	0.2 „ ...	± 0.005 .
Cover, peripheral holes, width ...	0.3 „ ...	± 0.005 .

	Dimension.	Tolerance. in.
Slide, thickness ...	20 I. W. G.	.....
Slide, width of upper surface ...	0.5 in ...	+ 0.01 (excess only).
Lamp, over all length of jet ...	Approx. 0.6 „ ...	To suit the requirements for the position of the jet when tilted.
Lamp, bore of jet at end.	0.0625 in.	$\pm$ 0.005.
Bead, diameter ...	0.15 in ...	$\pm$ 0.01.
Thermomter Socket Internal diameter ...	0.6 in ...	$\pm$ 0.01.
Length of short side measured from under surface of cover ...	Approx. 0.5 in ...	.....
Length of long side measured from under surface of cover ...	Approx- 0.75 in...	.....
Distance of centre of socket from centre of cover measured on the under side ...	Approx. 0.7 in ...	.....
These dimensions are subject to the correct placing of the thermometer when in position ...	.....	.....
Vertical depth of lowest part of thermometer below centre of under side of cover ...	1.5 in ...	$\pm$ 0.1.

The thermometer socket is in the form of a split tube, mounted on a diameter at right angles to the diameter through the centre of the holes, and fitted at such an angle as to bring the bulb of the thermometer when in place, vertically below the centre of the cover and at the correct distance from it.

A white bead, the dimensions of which represent the size of test flame to be used, is mounted in a visible position on the cover.

Materials.—All parts excepting bead, brass or gun-metal. Bead ivory or other suitable material.

Cover fitted with stirrer.—Provisions may be made in the cover for the reception of a stirrer which projects into the oil cup, for use with viscous materials only.

A bush is mounted on the cover in a position diametrically opposite the thermometer mounting, and its length is such and it is set at such an angle that the stirrer rod clears the oil-level gauge and the blades operate below the level of, and without fouling, the thermometer bulb. The bush is placed as near as practicable to the outer edge of the cover.

	Dimension.	Tolerance. in.
Stem, length, overall ...	4 in	± 0.1 .
" " lower and to point of attachment of blades ...	Approx. 0.1 in ...	.....
Stem length lower and to upper surface of collar...	1.9 in ...	± 0.1 .
Stem, length, upper surface of collar to lower end of thread ...	2 in ...	± 0.1 .
Stem, diameter ...	Approx. 0.125 in	.....
" " of collar ...	.. 0.25 in	.....
" thread ...	7 B. A. ...	.....
Blades, thickness ...	17 I. W. G. ...	.....

	Dimension.	Tolerance. in.
Blades, length excluding root	... 0.5 in	... ± 0 .
Blades, breadth (all corners of blades rounded)	5/16 in (0.3125 in)	± 0.01 .
Blades, angle	... Approx. 45	... ..
Sleeve, length	... To suit stem giving free rotation with no appreciable vertical play when screwed home	... ..
Diameter of bore	... Sliding fit on stem	... ..
„ „ collar	... Approx. 0.25 in	... ..

The stirrer consists of a round stem having four blades or vanes silver soldered in place at one end. A collar is fixed on the stem so that when the stem is inserted into the bush from below, it is arrested at a position such that the correct length protrudes into the oil cup. The top end of the stem is reduced and screwed.

A longer sleeve having an internally screwed, knurled knob soldered to its upper end, is passed over the upper end of the stem and screwed home. The length of the sleeve is such that a flat-faced collar at its lower end just comes into contact with the upper end of the bush, leaving the stirrer free to rotate without appreciable vertical play.

A flat-headed cylindrical plug is provided for insertion in the bush when the stirrer is not in use.

Material—Brass or gun-metal.

Heating vessel.—The heating vessel or bath consists of two flat-bottomed cylindrical copper vessels placed coaxially one inside the other and soldered at their tops to a flat copper ring, greater in outside diameter than the larger vessel and of smaller inside diameter than the smaller vessel. The space between the two vessels is thus totally enclosed and is used as a water jacket.

	Dimension.	Tolerance. in.
Inner vessel, thickness ...	24 I. W. G. ...	.....
„ „ internal diameter ...	3 in ...	$\pm 0.05.$
Inner vessel, internal depth ...	2.5 in ...	$\pm 0.05.$
Outer vessel, thickness, not less than ...	24 I. W. G. ...	.....
Outer vessel, internal diameter ...	5.5 in ...	$\pm 0.1.$
Outer vessel, internal depth ...	5.75 in ...	$\pm 0.1.$
Top plate, thickness, not less than ...	20 I. W. G. ...	.....
Top plate, outer flange projection ...	0.375 in ...	$\pm 0.1.$
Top plate, diameter of central hole ...	To suit ebonite or fibre ring-clearance not to exceed 0.1 in ...	.....
Ebonite or fibre ring, internal diameter ...	Easy fit on oil cup ...	.....
Ebonite or fibre ring, external diameter of flange ...	2.75 in ...	$\pm 0.02.$
Ebonite or fibre ring, overall depth of spigot ...	0.25 in ...	$\pm 0.02.$
Ebonite or fibre ring, thickness, flange and spigot ...	0.08 in ...	$\pm 0.005.$

	Dimension.	Tolerance. in.
Ebonite or fibre ring, screws, C. S. ...	8 B. A, $\times 0.15$ in	.....
Thermometer socket, internal diameter ...	0.6 in	± 0.01 .
Thermometer socket, height from top of plate	0.75 in	± 0.05 .

An ebonite or fibre ring of right-angle section is fitted into the hole in the centre of the flat ring forming the top of the bath and, when the apparatus is in use, the oil cup fits into, and its flange rests upon, this ebonite or fibre ring so that the oil cup is centrally disposed within the heating vessel. The ebonite or fibre ring is secured in place by means of six small screws having their heads sunk below the surface of the ring, to avoid metallic contact between the bath and the oil cup.

A split socket, similar to that on the cover of the oil cup, but set vertically, allows a thermometer to be inserted into the water-space. A funnel and overflow pipe also communicate with the water-space through the top plate and two loop handles are provided thereon.

The bath rests upon a cast-iron tripod stand, to the ring of which is attached a cylindrical copper jacket not less than 24 I. W. G. flanged inwards at the top, and of such dimensions that the bath, while resting firmly on the iron ring just touches with its outward projecting flange the inward turned flange of the jacket. Two handles are provided on the outer jacket.

DIAMETER OF THE OUTER JACKET 6.5 INCHES ± 0.1 INCH.

Spirit lamp.—A spirit lamp is provided for raising the temperature of the water bath, but any other suitable means may be employed for this purpose.

Thermometers.—Two thermometers are provided, the one for ascertaining the temperature of the bath, the other for determining the flashing-point.

OIL CUP THERMOMETER.

- Type ... Mercury in glass, nitrogen filled, graduated on the stem, enamel back.
- Length ... Approximately 9 inches.
- Stem ... Diameter 0.24 to 0.28 inch.
- Bulb ... Spherical ; made of normal glass approved by the Board of Trade. Diameter, 0.35 inch $\pm$ 0.05 inch.
- Range ... 50° to 150° F. with expansion chamber. Distance from the bottom of the bulb to the 50° line, 2.75 inches to 3.15 inches. Distance from the 50° line to the 150° line, not less than 4.75 inches.
- Immersion... A Swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 2.40 inches $\pm$ 0.05 in.
- Graduation... Scale graduated in 1° F. divisions. Every 5° and every 10° to be indicated by longer lines. Figured at every 10° in full.
- Marking ... "Abel Oil Cup" : Identification number "Fahrenheit maker's or vendor's name or the trade mark.

WATER BATH THERMOMETER.

- Type ... Mercury in glass, nitrogen filled, graduated on the stem, enamel back.
- Length ... Approximately 9 inches.
- Stem ... Diameter, 0.24 to 0.28 inch.
- Bulb ... Cylindrical, made of a normal glass approved by the Board of Trade, length approximately

0.8 inch. Diameter not to exceed the diameter of the stem.

Range ... 90° to 190° F. with expansion chamber
Distance from the bottom of the bulb to the 90 line 3.95 inches to 4.35 inches. Distance from the 90° line to the 190° line, not less than 3.55 in.

Immersion... A swelling is made in the stem to ensure that the thermometer shall be fixed in its brass collar so that the distance from the top of the collar to the bottom of the bulb is 3.5 inches. ± 0.1 in.

Graduation ... Scale graduated is 1°F. divisions. Every 5° and 10° to be indicated by longer lines. Figures at every 10° in full.

Marking ... "Abel Water Bath" : Identification number
"Fahrenheit" : maker's or vendor's name or trade mark.

The brass collar of the thermometer is in each case of the following dimensions :—

Outside diameter—push fit in socket.

Thickness of tube—22 I. W. G.

Thickness of flange—0.1 inch. ± 0.001 inch.

III (ii) METHOD.

(1) For Petroleum flashing below 90°F.

The Test Apparatus shall be placed for use in a position where it is not exposed to currents of air or draught.

The heating vessel or water-bath shall be filled by pouring water into the funnel until it begins to flow out at the spout of the vessel. The temperature of the water at the beginning of the test shall be 130°F., and no heat shall be applied to the water-bath during the test. When a test has been completed and it is desired to make another test the water-bath shall be again raised to 130°F., which may conveniently be done while the petroleum cup is being emptied, cooled and refilled with a fresh sample to be tested. The next test is then proceeded with.

If an oil-test lamp is being used it shall be prepared by fitting it with a piece of flat plated candle. Wick and filling it with colza or rape oil up to the lower edge of the opening of the spout or wick tube. The lamp shall be trimmed so that when lighted it gives a flame of about 0.15 of an inch diameter, and this size of flame, which is represented by the projecting white bead on the cover of the oil-cup is readily maintained by simple manipulation from time to time with a small wire trimmer. A gas test flame may be employed and if so, the size of the jet of flame shall be adjusted to the size laid down above.

The bath having been raised to the proper temperature the cup shall be placed on a level surface in a good light, and the oil to be tested shall be poured into it until the level of the liquid just reaches the point of the gauge which is fixed in the cup. Before a test is begun the temperature of the oil shall be determined and shall be brought to approximately 60°F. The cover with the slide closed shall then to be put on to the cup and pressed down so that its edge rests on the rim of the cup and the cup shall be so placed into the bath or heating vessel, every care being taken to avoid wetting the sides of the cup with the oil. The Thermometer in the lid of the cup has been adjusted so as to have the correct immersion when the brass collar of the thermometer is properly seated, and its position shall not in any circumstances be altered. When the cup has been placed in the proper position, the scale of the thermometer faces the operator.

The test-lamp shall then be placed in position upon the lid of the cup. When the temperature has reached 66°F. the operation of testing shall be begun, the test flame being applied once for every rise of one degree, in the following manner :—

The slide shall be slowly drawn open while a metronome, set at 75 to 80 beats per minute, beats three times and shall be closed during the fourth beat. A pendulum of 24 inches effective length may be used in place of the metronome counting one beat from one extremity of the swing to the other.

The barometric pressure shall be observed and recorded. No corrections shall be made except in case of dispute, when the flashing-point figure shall be corrected according to the following rule :—

For each inch (25.4 mm) below 29.92 in. (760 mm.) barometric reading add 1.6° F to the flashing-point.

For each inch (25.44 mm) above 29.92 in. (760 mm.)

barometric reading subtract 1.6°F from the flashing-point.

(2) For petroleum flashing between 90°F and 120°F .

The air-chamber which surrounds the oil-cup shall be filled with cold water at a depth of 1.5 inches and the heating vessel or water-bath filled as usual, but also with cold water. The lamp shall then be placed under the apparatus and kept there during the entire operation, and the temperature of the oil raised at the rate of 2°F to 2.25°F per minute, the testing being carried out as laid down in the previous section, except that the test flame shall first be applied when the temperature has reached 80°F .

(3) For solid petroleum mixtures

Solid petroleum mixtures are to be tested in the Abel Apparatus in the following manner:—

The solid mixture must be cut into cylinders 1.5 inch long and 0.25 inch in diameter by means of a cork borer or other similar cutter having the correct internal diameter. These cylinders are to be placed in the petroleum cup of the testing apparatus in a vertical position in such number as will completely fill the cup. The cylinders must be in contact with one another, but must not be so tightly packed as to be deformed in shape.

Five or six of the cylinders in the centre of the cup must be shortened to 0.5 inch to allow space for the thermometer bulb.

The air bath of the testing apparatus must be filled to a depth of 1.5 inch with water. The water bath must then be raised to, and maintained at, a temperature of about 80°F .

The cup must then be placed in the air bath, and the temperature of the sample must be allowed to rise until the thermometer in the oil-cup shows 75°F ., when the test flame must be applied.

If no flash is obtained, this temperature must be maintained constant in the oil-cup for one hour, at the expiration of which time the test flame must again be applied.

If a flash is obtained, the solid mixture will be subject to the provisions of the Petroleum Act 1934.

(Note).—It may in many cases, save time in testing samples of petroleum mixtures to apply the test flame after the sample has been a few minutes in the cup and while still at the temperature of the room in which the test is being carried out; provided that this temperature is below 76°F . If a flash is obtained by this means, it is unnecessary (for the purpose of the Petroleum Act) to proceed with the test at a higher temperature.

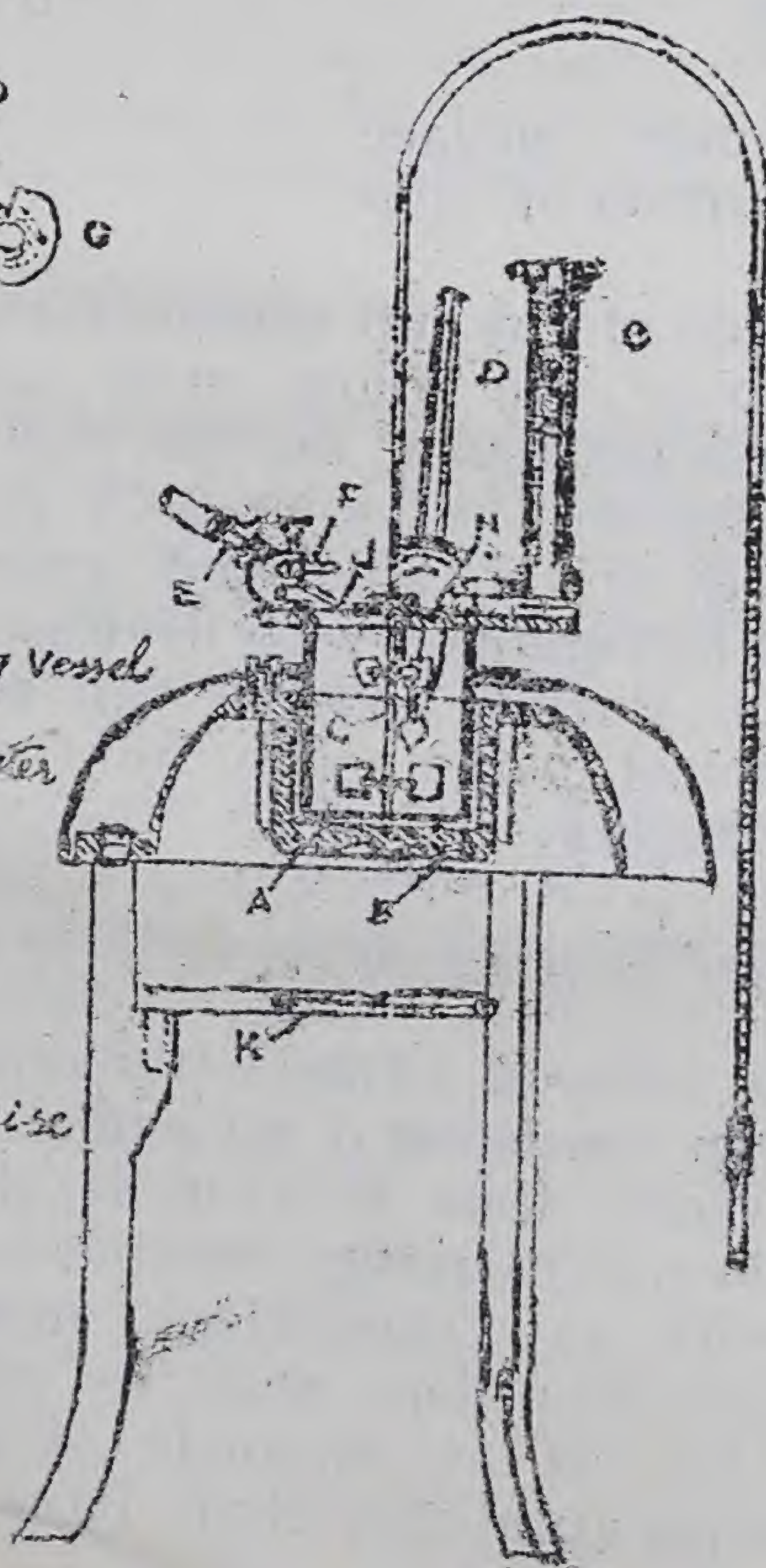
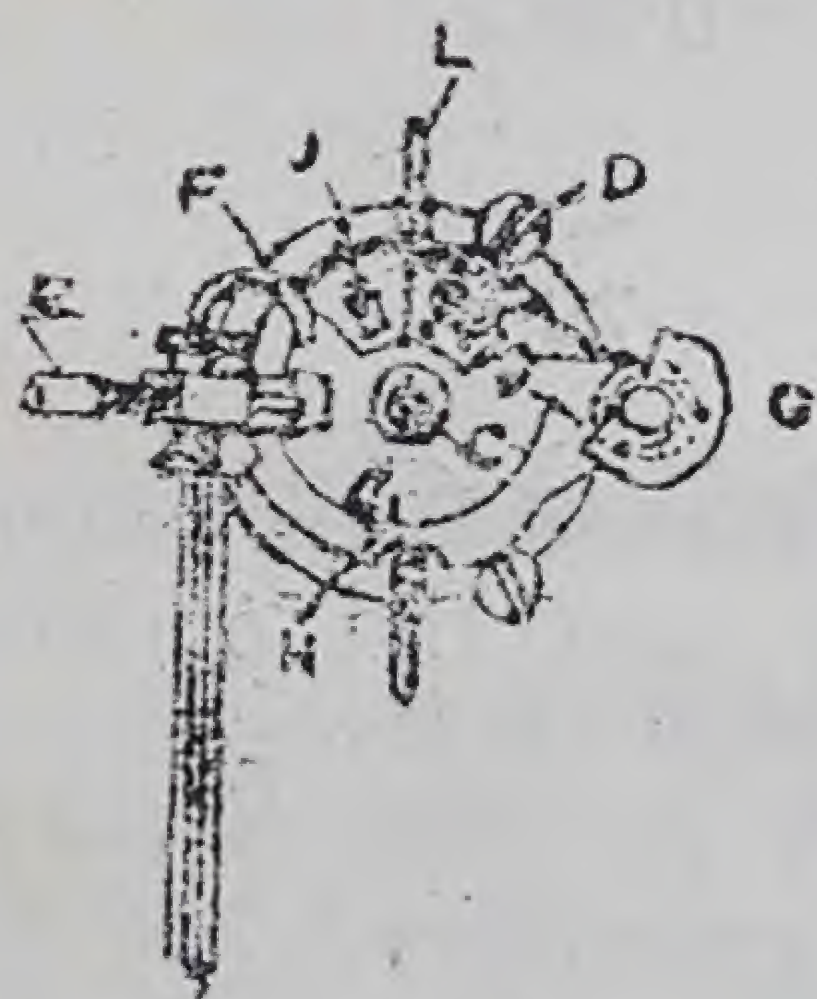
IV (1) The Pensky-Martens Apparatus.

The standard Pensky-Martens Closed Tester shall be used for determining the flashing-point of all petroleum products having a flashing-point above 120°F.

Every instrument shall be marked with the letter I. P. T. an identification number (on the cup, cover and top plate) and the name of the maker or vendor, such stamping implying a guarantee that the instrument complies with the requirements specified below.

The Pensky-Martens Tester shall include the following major parts:

Cup.—The cup of the standard Pensky-Martens Tester shall be made of brass and shall satisfy the following dimensional specifications :—



- A. Oil cup. B. Heating vessel.
- C. Stirrer. D. Thermometer.
- E. Ignition lever.
- F. Pilot Burner.
- G. Spring Handle.
- H. Revolving Shutter.
- J. Orifice. K. Gauge Disc.
- L. Lifting Hooks.

INCHES.		
Dimensions.	Normal.	Tolerance in.
Inside diameter below filling mark ...	2.000	± 0.050
Difference inside and outside diameters below filling mark ...	0.125	± 0.010
Inside height ...	2.200	± 0.050
Thickness of bottom ...	0.095	± 0.025
Distance from rim to filling mark ...	0.860	± 0.015
Distance lower surface flange to bottom of cup	1.795	± 0.150

The inside of the cup may be turned to a slightly larger diameter above the filling mark and the outside may be tapered above the flange, but the wall thickness at the upper edge shall be not less than 0.04 in. The flange should be approximately 0.5 in wide and approximately 0.125 in thick.

It shall be equipped with devices for locating the position of the lid on the cup and the cup centrally in the stove. A handle, attached permanently to the flange of the cup is a desirable accessory.

NOTE.—If the bottom of the cup is affixed it shall be brazed or hard soldered.

Stirring device.—The lid shall be equipped with a stirring device consisting of a vertical steel shaft, not less than 0.1 in nor more than 0.125 in in diameter, mounted in the centre of the cup, carrying two-bladed brass propellers, and provided with any convenient means for operating. The blades of both propellers shall be approximately 0.3 in wide and shall be set at an angle of approximately 45°. The smaller (upper) propeller shall have an over-all diameter of

approximately 0.75 in. The larger (lower) propellers shall have an over-all diameter between 1.25 and 1.75 in. The thickness of the propeller blades shall be not less than 0.048 in nor more than 0.08 in., which limits correspond respectively to No. 18 and No. 14 S. W. G. The propeller blades shall be brazed or hard soldered to collars on the vertical shaft and the collars shall have horizontal and vertical dimensions not greater than 0.4 in.

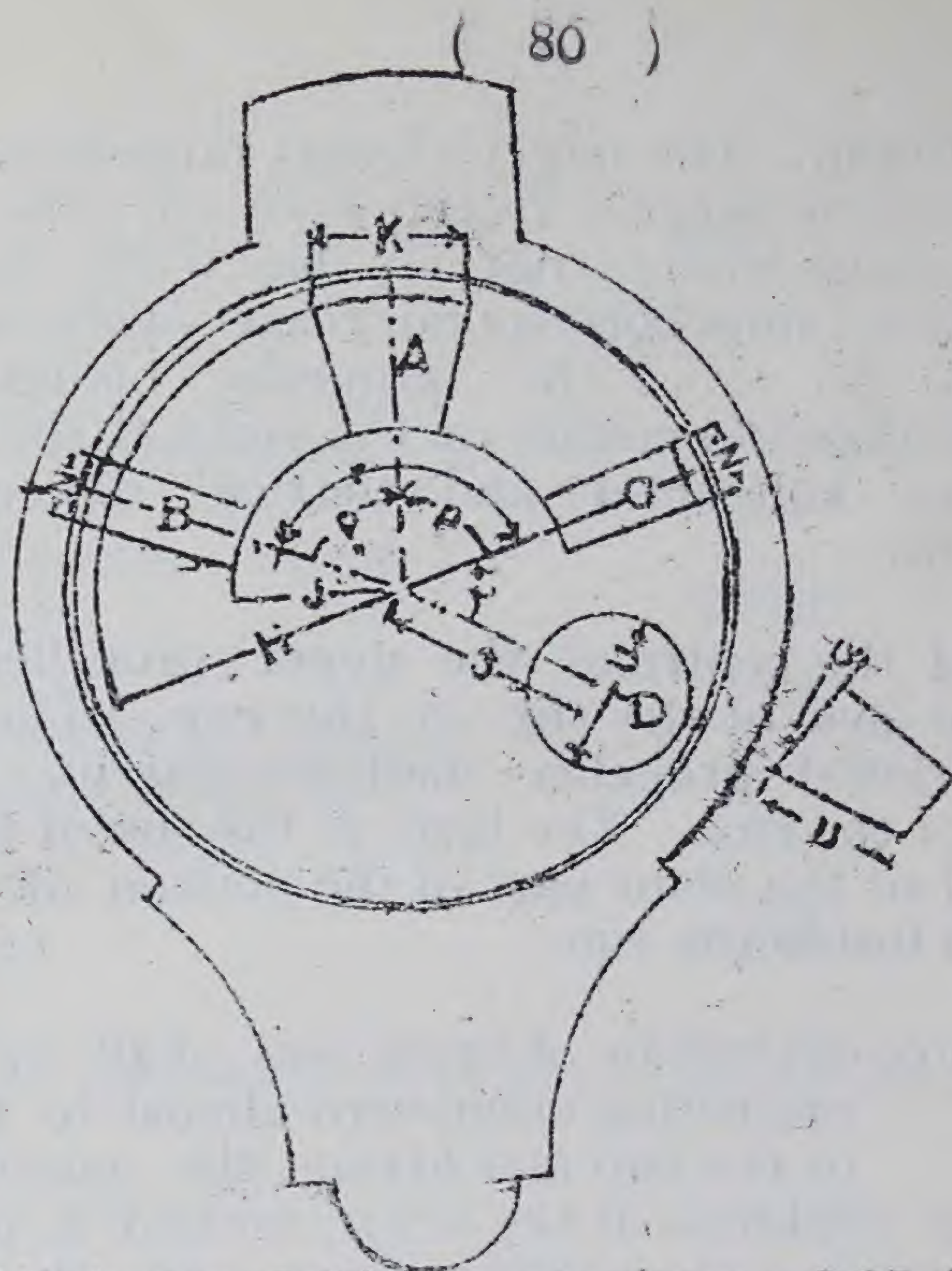
The plane of the centre of the upper propeller shall be 0.4 in., below the level of the rim of the cup. The plane of the centre of the lower propeller shall be 2.0 in., below the level of the rim of the cup. The level of the rim of the cup is in effect the level of the plane part of the portion of the lower surface of the lid inside the rim.

The cover proper shall be of brass and shall have a rim projecting downward almost to the flange of the cup and fitting the outside of the cup closely. The thickness of the cover, measured just inside the rim, shall be not less than 0.03 in., nor more than 0.08 in. There shall be a proper locating device engaging with a corresponding locating device on the flange of the cup.

There shall be four openings in the cover.

Opening A is an area defined by arcs of two concentric circles and the intersected lengths of two radii. The radius of the outer circle shall be not less than 0.94 in., nor more than 0.97 in. The chord of the arc of the outer circle shall be not less than 0.5 in. nor more than 0.54 in.

Opening B and C are equal areas each of the same general form as opening A but of approximately half the (angular) width. The radii of the defining inner and outer circle shall be within the limits specified for the radii of the two circles, arcs of which partially define opening A. The chord of the outer arc for opening B or opening C shall be not less than 0.19 in nor more than 0.22 in. The sum of the areas of openings B and C shall be not less than 75 per cent nor more than 100 per cent of the area of opening A.



H Minimum 0.94 in., maximum 0.97 in.

J „ 0.53 „ „ 0.56 „

K „ 0.50 „ „ 0.54 „

N „ 0.19 „ „ 0.22 „

S Approximately 0.75 in.

U „ 0.5 „

Angles p Equal.

Angle r Minimum 135° maximum 140° .

„ t „ 50° „ 60° .

„ y „ 10° „ 15° .

COVER OF PENSKY-MARTENS TESTER.

Openings B and C shall be equally distant from opening A and radii drawn through each of their centres shall be at an angle of not less than 135° nor more than 140° .

Openings A, B and C need not conform exactly to the shape of geometrical figures bounded by arcs of two concentric circles and intersected length of radii. Their boundaries must, however fall on or between the lines indicated by the limiting values of the dimensional specification of the preceding text.

Opening D is a split tube to grip the thermometer collar. It shall be set at an angle of not less than 10° nor more than 15° from the perpendicular. Its centre is approximately 0.75 in., from the centre of the lid and on a radius at an angle of not less than 50° nor more than 60° from the radius passing through the opening C. Its height shall be such that when a standard thermometer is in position, the bottom of the bulb shall be 1.5 in., ± 0.1 in., below the level of the rim of the cup (which corresponds to the lower surface of the portion of the lid inside the rim).

The lid shall be equipped with a brass shutter approximately 0.1 in., thick, operating on the plane of the upper surface of the lid. The shutter shall be so shaped and mounted that it rotates on the surface of the lid about an axis normal to the lid, and through its centre, between two stops so placed that when in one extreme position the openings A, B and C of the lid are completely closed and when in the other extreme position these openings are completely opened.

The tip of the flame jet shall have an orifice 0.027 in. to 0.03 in. diameter. The flame exposure device shall be equipped with an operating mechanism which, when the shutter is in the "open" position, depresses the tip so that the centre of the orifice is between the plane of the under and upper surfaces of the lid proper at a point on a radius passing through the centre of the larger opening A and approximately 0.1 in. from the outer edges of the opening.

The test flame shall be approximately spherical and shall be regulated to be of the same mean diameter as a bead 0.16 in., in diameter of some suitable material mounted on the lid.

The mechanism operating the shutter should be of the spring type and constructed so that when at rest the shutter shall completely close the three openings. When operated to the other extreme the three openings in the lid shall be fully open and the tip of the exposure tube shall be fully depressed.

NOTE.—A pilot for automatic relighting of the test flame should be provided.

Where gas is not available, an oil burner shall be used as

the test flame, the position of which shall correspond with that of the gas flame previously specified.

Heat shall be supplied to the cup by means of a properly designed stove which is equivalent to an air bath. This stove shall consist of (1) an air bath and (2) a top plate on which the flange of the cup rests.

The air bath shall have a cylindrical interior 1.625 in., to 1.66 in. deep and a diameter not less than 0.125 in., nor more than 0.156 in., greater than the outside diameter of the cup, with the minimum clearance of 0.05 in. The air bath shall be a flame-heated metal casting.

NOTE —The casting shall be so designed and used that the temperature of bottom and walls is approximately the same. On this account it should be not less than 0.25 in. thick. The apparatus shall be designed so that products of combustion of the flame cannot come into contact with any part of the cup.

Top plate.—The top plate shall be of metal. The total distance from the upper surface of the plate to the bottom of the air bath shall exceed the distance from the under surface of the flange to the bottom of the cup by not less than 0.063 in nor more than 0.125 in.

The top plate shall be mounted with an air gap between it and the air bath. The top plate may be attached to the air bath by means of three screws and spacing bushings. The spacing bushings should be of proper thickness to define the air gap which shall be not less than 0.125 in nor more than 0.187 in. The spacing bushings shall be not more than 0.375 in diameter.

A low range thermometer shall be used with the Standard Pensky-Martens Tester for determining the flashing point above 120 F. The thermometer shall comply with the specification given below :—

The thermometers shall conform to the following general specifications :—

Type.	Mercury in glass, except where otherwise stated. Engraved stem. Nitrogen filled.
Stem.	The stem shall be made of lead glass or other suitable glass Enamel back.

The bulb, shall be made of a suitable thermometric glass approved by the National Physical Laboratory. At present these glasses are ;—



Identification mark.	Approved for temperatures upto.
-------------------------	--

Normal glass made by James Powel and Sons Ltd.	Single blue stripe.	350°C.
Normal glass made by Frank Tomay and Co. Ltd.	Two blue Stripes.	350°C.
Normal glass Jena III made by Schott and Genossen.	Purple stripe ...	350°C.
Normal glass Gege Eff. Made by Glaswork Cuxtav Fischer.	Blue and a red stripe.	350°C.
Corning Borosilicate made by Corning Glass Co.	... ..	450°C.
Jena 59 iii made by Schott and Genossen.	... ..	450°C.
Jena 2954 iii made Schott and Genossen.	Single black stripe.	450°C.

No contraction chamber shall be above the immersion line and no enlargement of the bore shall be within 10 mm. of the immersion line or of any part of the scale.

The graduation lines shall be clearly etched, and of uniform thickness not exceeding 0.15 mm. The lines shall all be at right angles to the axis of the thermometer. When the thermometer is viewed from the front and in a vertical position the lines shall all finish on a line parallel to the axis on the left hand side. Certain of the graduation lines shall be extended on the right hand side but the shortest graduations shall not extend across the bore. When the diameter of the tube permits the figures shall be upright when the thermometer is viewed from the front and in a vertical position, and should preferably be placed so that they would be intersected by the line to which they refer if it were extended.

In addition to the special markings given in the table, each thermometer shall be marked with an identification number, and the maker's or

veador's name or trade mark :—

Name and special marking	..	"I. P. T. P. M.—Low"
Dimensions-stem, diameter	...	6-7 mm.
Bulb, shape	...	Round.
Bulb, length	...	.....
Bulb, diameter	...	8 mm. max.
Overall length ± 5 mm	...	275 mm.
Length of graduated portion	...	150-180 mm.
Distance, bottom of bulb to 20° mark ..		70-85 mm.
Range	...	20°F. to 230°F.
Graduation	...	1°F.
Longer lines at each	...	5°F. and 10°F.
Figured at each	...	10°F.
Expansion chamber	...	Required
Immersion	...	2.2 in.
Top finish	...	Glass ring.

Each thermometer shall be mounted securely in a thermometer collar so that from the under-side of this collar to the bottom of the bulb the distance is 2.1 in. (± 0.05 in.) The thermometer collar shall have an outside diameter of 0.5 in., ± 0.002 in., and a flange 0.1 in., ± 0.01 in., in thickness. The cement used to fasten the thermometer into the collar shall be of such a nature that it will withstand the action of oil up to the highest temperature at which the thermometer is used.

DRYING OF THE SAMPLE.

If gas oil or fuel oil is being tested, the sample shall be dried by the following methods :—

One hundred grams of well-dried granular calcium chloride is placed in a dry wide mouth stoppered glass bottle.



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